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## RECENT EXCAVATIONS IN THE ABBEY OF SAINT BAVON

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**I**N the quaint old city of Ghent, Belgium, much speculation has been caused by finding, under the ruined walls of the ancient Abbey of Saint Bavon, a number of tombs, the existence of which, up to this time, was unknown. At first there seemed no doubt that the graves contained the remains of victims tortured and buried alive, thus disclosing another grawsome chapter of horrors perpetrated in the XVI century when Flanders was under Spanish rule.

Known as the Chateau des Espagnols (the Castle of the Spaniards) the beautiful Abbey of Saint Bavon was for a century and a half the citadel of Spain and it was naturally to this period that was first ascribed the recent discoveries which seemed to stand as monuments to the cruelty and bigotry of the times. Ghent was the very center of opposition to the Spanish rule and the theater of many important events of that period. In appearance it has never ceased to belong to the Middle Ages and it is difficult to realize that we are in the XX century as we pass along its quiet streets, the placid waters of the numerous canals reflecting the curious old houses with their fantastic variety of gables ornamented with carvings and scrollwork.

Passing through a massive gateway, we find ourselves among the imposing ruins of the Abbey. The mellow tones of the chimes from the old belfry and the soft twitter of birds in the ivy-covered walls, alone break

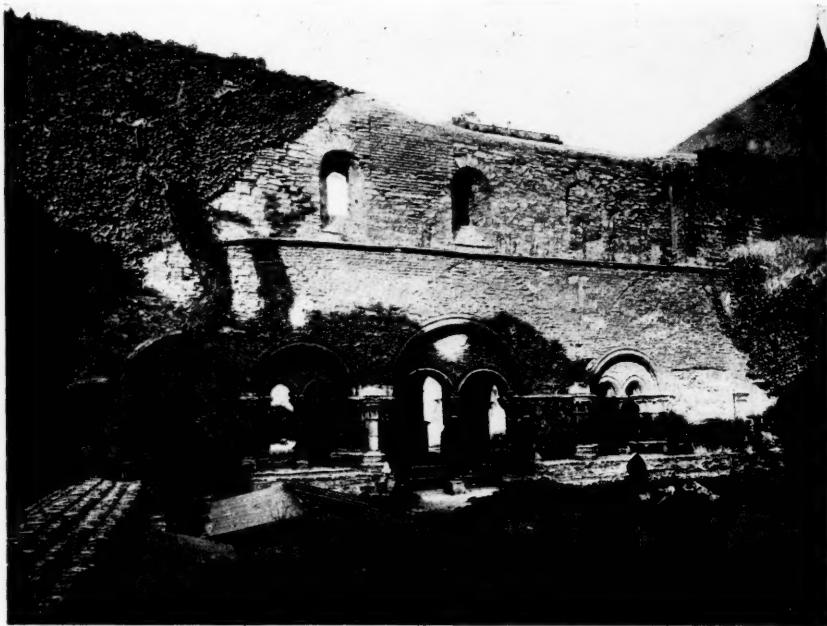


FIG. 5. RUINS OF THE CHAPTER HOUSE

the silence which broods over the place. The spirits of the dead seem to rise to meet us and within the walls of this beautiful old cloister there is a world of romance and tragedy. One of the oldest ecclesiastical ruins extant, its early history is of unusual beauty and interest and today it stands one of the first monuments to Christianity in Belgium.

This magnificent edifice was built on the site of a Temple of Minerva in the year 630, by Saint Amand, the great French missionary, and was first known as the Monastery of Saint Peter. Here it was that Saint Bavon came after his conversion by Saint Amand and lived many years a recluse. So great was his piety and so wonderful the miracles he wrought, that 60 noblemen, following his example, devoted themselves to a penitential and austere life. The church of Saint Bavon was founded by them and from that period the Abbey became known by that name and is mentioned as such in documents dated 864 and 974. It was restored by Saint Bavon and was richly endowed by him and until the XVI century was one of the wealthiest of Flanders. It is said to have been bestowed upon the celebrated Eginald, secretary and biographer to Charlemagne. It is certain that he was Abbot here as he is mentioned as such in a diploma of Louis le Débonnaire, dated 819.

In the XIII and XIV centuries it was often the residence of the Counts of Flanders, and for a time Edward III of England and his queen, Philippine, lived here and it was here that their son, John of Gaunt, later Duke of Lancaster, was born in 1340.



FIG. 6. PICTURESQUE CORNER IN RUINS OF THE ABBEY OF SAINT BAVON

In the ancient church, of which only the outer walls remain, on June 20, 1369 was celebrated with great pomp and splendor, the marriage of Marguerite, daughter of Louis de Male, Count of Flanders, with Philip the Bold, Duke of Burgundy. Here also in 1422 was buried the Princess Michelle of France, first wife of Philip the Good, the story of whose tragic death by poisoning in the Cour de la Poterne, rue d'Assaut, is well known.

With this brief and superficial glance at the earlier history of the Abbey, we arrive at the year 1540. After the revolt of the people of Ghent in 1539 against the rule of Spain, Charles V decided to make within the city a fortress to hold them in better subjection. To choose a good situation for his new citadel, he ascended the tower of the church of Saint John, accompanied by his brother Ferdinand and the Duke of Alva. His glance fell upon the Abbey and he decided upon that spot—the one where for 900 years the peaceful monks had led undisturbed their quiet lives. On May 12, 1540 therefore, the Chapter left the Abbey and installed itself in the church of Saint John, which from that time possesses the relics and the name of Saint Bavon. (When the bishopric of Ghent was created by Paul IV in 1559, at the request of Philip II, this church was made the Cathedral.)

The work of demolition immediately began and only such buildings were spared as would be useful adjuncts to the new castle, already mentioned as the Chateau des Espagnols. It was here that Counts Egmont and Horn were imprisoned in 1567. The church was left undisturbed to serve as

place of worship for the garrison and until the beginning of the XIX century, the Cloister, the Refectory, the Chapter House, and the Lavatorium or Santuarium, were preserved. It is in the midst of their picturesque ruins, which since 1834 have been under the surveillance of the Local Commission of Monuments, that the Lapidary Museum was established in 1882.

The destruction of the old Monastery mill in 1885 brought about the unexpected discovery of 59 ancient tombstones of the XIII century, now in the museum, thus making it the richest of its kind in the world. Aside from their great archæological value, they are extremely interesting as the engraving of life size figures on them is but slightly worn. Of all perhaps the most curious is the gravestone of the artist, Hubert van Eyck. This slab was unearthed in 1892 and is unusual on account of its size, being some 7 ft. high by 4 ft. wide. Deeply cut into the stone is the figure of a skeleton



FIG. 7. THE GOTHIC HALL

partially covered by a square shield which evidently at one time bore an inscription. One bearing the date 1271 and representing a father and daughter of the nobility, is also very remarkable. (Fig. 8.)

Among the many treasures in the museum is the handsome sarcophagus of John of Cleves (1504) and in the center of the hall is a Romanesque relief from the portal of the ancient church, found in 1852, which represents miracles wrought in 1058 by the relics of Saint Bavon. This remarkable collection is in the hall which was the Refectory and which has served in turn as arsenal, chapel, and until taken for the museum, as parochial church of Saint Macaire. It is the largest Romanesque hall in Belgium and with its high arched ceiling lighted by 24 windows, it is very impressive.

In 1495 the Abbot Mercat (natural son of Philip the Good, Duke of Burgundy and Count of Flanders) transformed part of the crypt into a

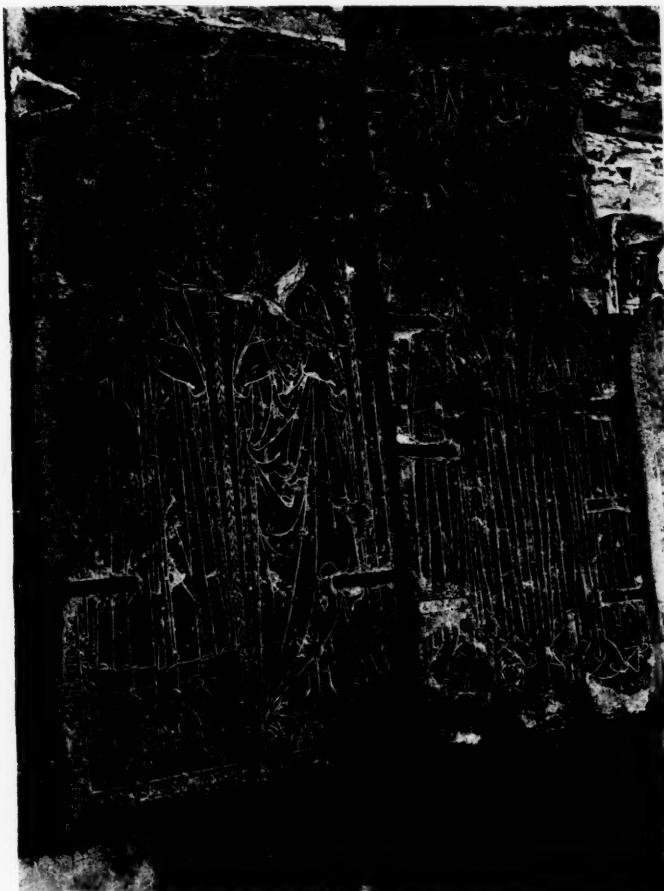


FIG. 8. TOMBSTONE IN THE LAPIDARY MUSEUM BEARING DATE 1271

Gothic hall, the vaulted ceiling of which is supported only by one central column.

Only three walls remain of the sadly dilapidated Chapter House. On the west side are the windows in the Transition style which are reproduced in all works on architecture. In 1845, 21 tombs in the shape of mummy cases, and dating from the XI century, were discovered under the hall, the stones covering them having been already removed when the pavement was laid in the XIII century.

The quaint old Gothic well, known as "The Miraculous Well of Saint Macaire," is particularly picturesque with its sharp, pointed cover clearly etched against the background of the dark, glossy leaves of the English ivy which covers the old grey walls.

Quite the most beautiful part of these old ruins, however, is the corner where stands the curious little two-story octagonal building known as the



FIG. 9. THE REFECTIONY

Lavatorium, or Santuarium, so called as the upper floor contained the relics of Saint Macaire. To ensure the safety of these, no stairway was made in the building, access being gained through the roof. After the suppression of the Abbey (1540), however, a stairway was built and the ground floor was converted into the burial place of the governors and chaplains of the Château des Espagnols. In 1634 it was converted into a chapel and dedicated to Saint Macaire. It is to the left of this queer little building that the recent excavations have been made near the southern side of the cloister, the pillars and arches of which have long since disappeared.

I approached the newly disturbed earth with hesitating step and with mingled feelings of interest and dread looked into the tombs below. One felt that it was sacrilege to gaze with the idle curiosity of the tourist into recently opened graves and to speculate upon the lives and deaths of the poor creatures whose bones today are exposed to the public gaze. My first impression was one of surprise at the unusual size of the skeletons. This quickly changed to horror at the sight which met my eyes and which seemed to evidence beyond a doubt the unspeakable cruelties which under Alva's rule were inflicted upon those who, justly or unjustly, fell under suspicion. Careful investigation however, has enabled the Curator of the Museum to place before the public a plausible explanation of the contents of these graves.

During the summer of 1910, when excavations were being made under the auspices of the distinguished archaeologist, Monsieur Van Werveke, Secrétaire de la Commission Communale de Publicité, to find traces of the Roman cloister, replaced by one of Gothic construction in 1495, a tomb,

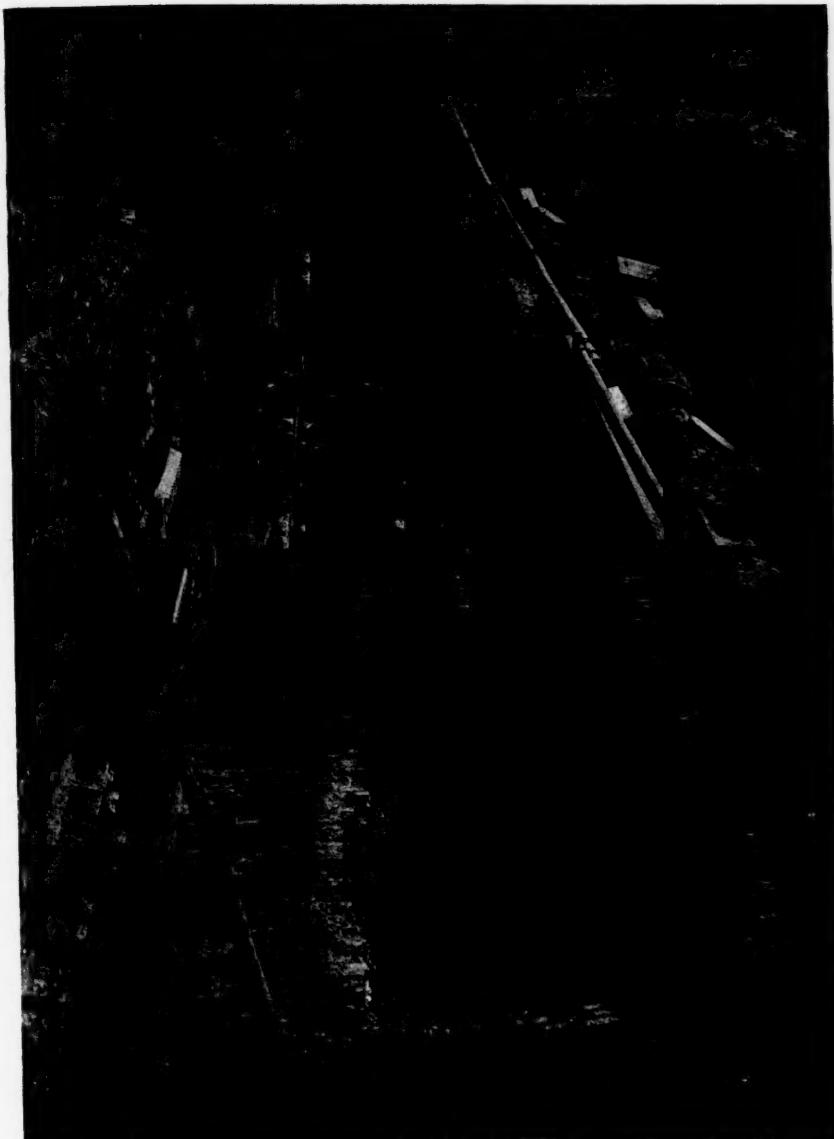


FIG. 10. GENERAL VIEW OF THE TOMBS EXCAVATED

built of bricks, was discovered. The slab which at one time covered it had disappeared and the interior had been filled up with rubbish, among which was found a quantity of small yellow, green, and brown enameled squares. These in the Middle Ages were used to make the curious mosaics

of which the Lapidary Museum contains numerous fragments. When the rubbish was cleared away, there was found, resting on a three armed cross of bricks, a skeleton, the legs and shoulders of which were encircled by heavy bands of iron to which were fastened large rings. The skeleton was lying on the right side and the skull was crushed in. (Fig. 1.)

The aspect was startling. The Curator, who has made exhaustive research in the archives concerning the corporal punishments inflicted in the middle ages on the accused and condemned, thought he had found the skeleton of one of those unfortunate women who sometimes were buried alive. The iron bands, the unusual and strained position of the skeleton, the crushed skull and the glass filled grave, all favored such an explanation.

The search was continued and 9 other skeletons were exhumed, 8 in brick tombs filled with rubbish, one covered by a pointed arch of bricks. At the end of the large pit which had been dug, another skeleton was found with the same iron bands fastened over the shoulders, but not over the feet. (Fig. 2.) The irons were alongside in a vertical position. Rusted by the dampness, they *could* have been bent by the weight of the glass, either toward the skeleton or toward the wall. This fact threw a doubt on the value of the admitted hypothesis and determined the Curator to make a minute examination of the walls of the tombs.

After they were cleaned with extreme care, he found that where the plaster still remained, a certain number of small and large crosses were traced in a rudimentary manner in oil colors of a reddish brown. In the first grave could be distinguished, on one side, the crucified Christ between the Virgin and Saint John the Baptist, and on the other side, the lower part of a figure in red draperies. In the tomb with the arched top were found narrow iron bands to which were attached at regular intervals small particles of oak wood. In the others were also found remnants of wood attached to the iron, always on the side toward the skeleton. At the head and foot of several were iron plates bent at right angles. All these circumstances caused the Curator to abandon his first theory and admit that he has discovered graves, probably of the XIV and XV centuries, in which the bodies were enclosed in caskets of oak, the sides and bottoms of which were encircled by heavy iron bands terminating in large rings which served as handles. The plates of iron, bent at right angles, held together the various pieces of wood by means of large nails, of which a number were found. In no account rendered of the expenses for the execution of a woman condemned to be buried alive, is there any mention of expenditures for irons to bind the victim, although the smallest expenses are set down in detail.

Several of the graves, however, present peculiarities which cannot be so easily explained. There are skeletons entirely covered by a heavy iron cage, resting on iron feet the length of the wall, and the bars of which are only about 4 in. apart at their widest opening. (Fig. 3.) In one of the tombs there is a plate of iron riveted to the cage on the side *toward* the skeleton. Here there can be no question of pieces of iron having been attached to a casket or box. There is a possibility that they were put in the graves so that a second casket might be placed above the first. This hypothesis is admissible because at the present day in the cemeteries of

FIG. 4. A HEAVY STONE WAS FOUND  
UPON THE SKULL.

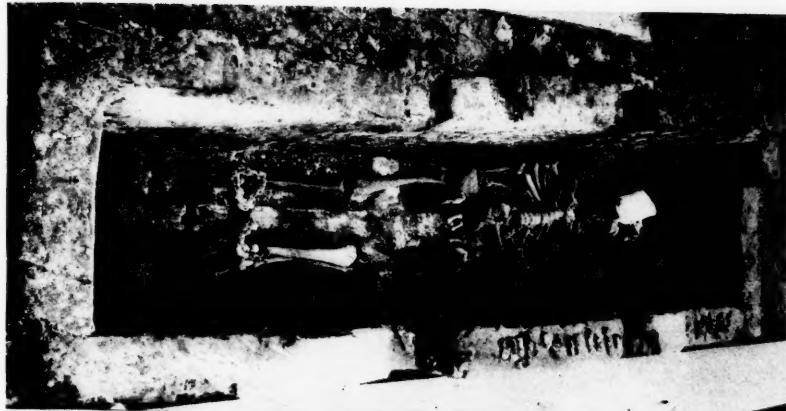
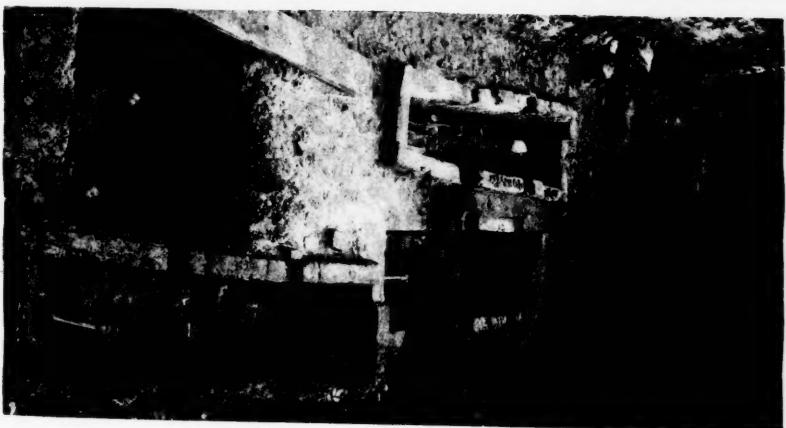


FIG. 1. THE FIRST SKELETON  
EXHUMED.



FIG. 2. AT THE END OF THE PIT  
ANOTHER SKELETON WAS FOUND.



Ghent, two, and sometimes three, coffins are placed in the same grave one above the other, but resting on iron bars fastened into the wall.

A document published in 1855 states that under the floor of the Chapter House, a skeleton in chains was found. These chains exist today and consist of two pieces composed of one large ring to which is attached a link upon which is fastened a hook. It is supposed that these pieces (which, by the confession of the author, were not fastened to the skeleton, but were



FIG. 3. SKELETON BENEATH AN IRON CAGE

lying alongside) served the same purpose as the iron bands found in the graves today—that is, the hooks were driven into the wood of the coffin and the link with the ring served as handles. As to the crushed skulls (Fig. 1) and one upon which a heavy stone was found resting (Fig. 4) the eminent Professor Leboucy of the University of Ghent has declared, after minute examination of the contents of the graves, that these could have been crushed by the weight of the glass and rubbish thrown in upon them. As to the

curious position of the first skeleton, (Fig. 1) it could have been caused by the iron band of the coffin which supported it slipping toward the right, thus causing the left shoulder to be raised.

There remains to explain the absence of the tombstones and the presence of rubbish in the graves. Official documents testify that Spanish soldiers violated the graves which they found and had even utilized a tombstone, by recutting it, to cover the grave of one of their Captains. It is not so astonishing then that here we find several of these tombs which were necessarily filled up with rubbish. On the skull of one of the skeletons there was found a chip bearing the name of a manufacturer of Nuremberg, Germany, and dated 1600. Therefore the glass thrown in with the chip could not have been put in the grave before the beginning of the XVII century and we know that in 1626 these graves were again violated.



FIG. II. TOMB OF THE XI CENTURY

All this would seem to point to the fact that these astonishing discoveries are not so awful as was at first supposed. In spite of all these theories, however, it is difficult to convince oneself that these are the remains of persons who have died natural deaths. It seems incredible that iron bands which encircled a coffin could shrink and bend to such an extent as to fit so snugly across the shoulders and legs. We instinctively compare these with the contents of the grave shown in the Cave de la Torture (The Torture Chamber) of the Château des Comtes.

We shudder at the horrible expressions of anguish depicted on all of the faces and from the wide-open mouths across the silence of the grave their shrieks of agony seem to echo down the ages.

EDINE FRANCES TISDEL.

Washington, D. C.



NORTH SIDE OF THE PLAZA OF MEXICO AT END OF XVIII CENTURY,  
THE PARIAN BEING S. W. OF THE ENCLOSURE

### THE PARIAN

THE name "Parian" was first applied to the part of the City of Manila, separated from the city and surrounded by walls, where the Chinese merchants resided and had their shops; and as there was frequent communication between the Philippines and Mexico during the XVI century, the name Parian was given to the collection of buildings near the center of what is now the Plaza de la Constitución in the City of Mexico, and which up to the time of being so called, was known as the "Tiendas y alcaicería de la plaza mayor," that is, "the shops and market place (for silk) of the main plaza."<sup>1</sup>

The form of this edifice was quadrangular, there being a second square inside the main structure. It squared with the plaza, *i.e.*, the north side faced the Cathedral, the east side the National Palace, the south side the Diputación (City Hall) and the west side the arcades of Los Mercaderes. Inside the inner square was a large open space called "El baratillo grande."

The building measured 95 varas (a vara = 33 $\frac{1}{3}$  in.) on the north side, 129 on the east, 102 on the south and 132 on the west. The disposition of the shops was as follows: on the north side there were only 4, on the east 14, of which one had 6 doors, 4 had 4 doors and the balance 2 doors each; on the south side were also 14 shops, 2 of them with 4 doors each, 3 with 3 and the one on the corner 2 doors; on the east and west sides were 10 shops, of which 3 had 3 doors each and the balance 2 doors each. Every shop had an upper story which served as a storehouse.

Eight archways gave entrance to the inside shops, 3 on the north and south sides, and one each on the east and west sides.

The walls of the building were of masonry and tepetate (a soft conglomerate found in abundance throughout the valley of Mexico) and the roofs and floors were tiled, most of the doors being of cedar.

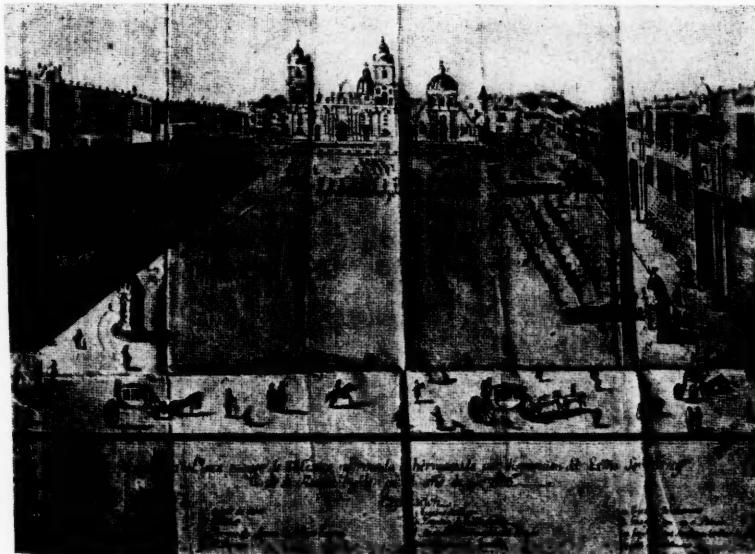
<sup>1</sup> Alamán, 8th Dis. 241.



THE PARIAN FROM THE WEST TOWER OF THE CATHEDRAL

The original structure, which was of wood of irregular shape, was destroyed by fire November 16, 1658; new shops, however, were built at once on the same site, also of wood. In June 1692, a year when corn and wheat were very scarce, a mob set fire to the buildings and the flames spread to the Palace, the City Hall and to other near-by edifices. Fortunately, the archives of the "ayuntamiento" were saved as was the "Pendón real," the royal standard.

To avoid a repetition of this conflagration the Council decided to build shops of more solid materials, and permission having been secured from the



VIEW OF MAIN PLAZA OF MEXICO IN 1793. FROM AN OLD WOOD CUT

Viceroy, work was begun under the direction of Captain D. Pedro Jiménez on August 8, 1695. By the end of December, 1696, the outside walls facing the Cathedral and Portal de los Mercaderes were finished; three other walls, the outside and inside walls facing the Palace and the interior wall parallel with the Portal de los Mercaderes were completed by December 1699. The outside south wall was finished in April 1703, while the north and south interior walls were built by D. Juan de Dios de Medina in April 1757.

In the inner square of the Parian at one time were a few wooden booths where were sold old clothes, second-hand books, firearms, saddles, trunks, old furniture and a variety of other junk. This was called "El baratillo grande" as already indicated, to distinguish it from the other "baratillo" which was located on the corner of the Cruz del Factor and Canoa streets, a site later occupied by the Iturbide Theater and today by the new national Chamber of Deputies. The "baratillo grande," upon the final destruction of the Parian, was removed to the "plazuela del Volador" where it is to this day, although it is known by the unsavory, but perhaps merited, name of "The Thieves' Market."

During the colonial period and for some years after the Independence the Parian was the scene of the greatest traffic activity in the City. Most of the merchants were Spaniards and in the early days of the XIX century they organized themselves into a military corps called the "Volunteers of Fernando VII," although they were popularly known as "Chaquetas," from the peculiar jacket each one wore. They were the Royalists of a few years later.

It was sacked in 1828 by a mob of Mexicans who were only too glad of an opportunity to let loose their hatred of the Spaniards. Every bit of money and merchandise disappeared. When order was restored many of the merchants refused to return to their shops and opened new places in the neighboring streets.

In 1843, the Parian having lost its prestige, Santa Anna proposed to remove it from the main plaza, with a view to beautifying that central spot and erecting in its center a monument commemorative of the Independence. The remaining merchants protested and they were sustained by the City Council, which derived a large income from the rental of the shops, but all without avail, for on July 24, 1843, the work of demolition began and by September 10 of the same year the last of the rubbish was cleared away.

Orozco y Berra in his article on the City of Mexico in *Dicc. de Hist. y de Geog.* records the following inscriptions on the walls of the Parian:

On the southwest corner fronting the Portal de los Mercaderes:

EYNANDO LA CATH  
Carlos II y GobernaN  
enDo Correg. D. Carlos



Fronting the City Hall (Diputación):

MAGESTD [ ] D (not legible)  
Con DE DE GA [ ] s Rs (not legible)

DEL POSSO se hizo esta Fab\*

Que iDeO iexecutó el Cap. D.PDRO Ximenéz DE los Cobos ReGr.I  
Obrº MR.ANO 1695

On the northwest corner fronting the Cathedral:

REYNANDO LA C	
Carlos II Y Govern	
Siendo Corregº D	

Fronting the Portal de los Mercaderes:

MA		T DE N. R. Y. S. D.
Con		e Galve estos R <sup>s</sup>
DEL		ose hizo esta FA (not legible)

Que iIDEO iexecutó el Cap. D.PDRO Ximénez DE los Cobos ReGr.I.  
Obrº MR.ANO 1695

On the northeast corner, fronting the Cathedral:

DOCT. D. Juan		uec (another letter not legible)
endo Corregº DO		TRISTAN
Pedro Ximénez d		obos (not legible)

Regidor de esta Ciudad y su Obrero mayor, Año de 1696.

Fronting the National Palace:

Govern		Oupo VI	
Montañes		poesta qua	
del posso q		do yidea d	

The blank spaces represent holes made in the walls, thus obliterating words that would make the sentences complete. The explanation of the presence of these holes is not apparent.

City of Mexico.

A. L. VAN ANTWERP.



**PREHISTORIC BRONZE SWORDS IN SCOTLAND.**—In discussing 11 bronze swords of prehistoric times found together in western Scotland, Mr. L. MacLellan Mann says they belong to the most elegant type of Bronze Age weapons, of the III, IV, and possibly V century B.C. They are equal sided, sharp-pointed, leaf-shaped weapons. They are pre-Roman and were succeeded, also in pre-Roman times, by an iron sword with edges parallel almost to the tip of the blade. This was longer than the bronze sword. The bronze weapon involved the highest skill and art in its casting and finishing. The blade was made very keen by being hammered out. Similar specimens are found in England and Ireland, but Continental specimens differ widely. The length varies from 17 to 30 in. Sometimes the hilt is made wholly of bronze, cast one piece with the blade. More often the hilt consists of a flat hilt-plate cast with the blade and originally covered with panels of horn, bone or wood. These panels were attached by rivets of bronze, wood or bone in holes drilled or punched out, or even cast in the hilt-plate.



FIG. 1. GRAVE RELIEF OF A FARMER

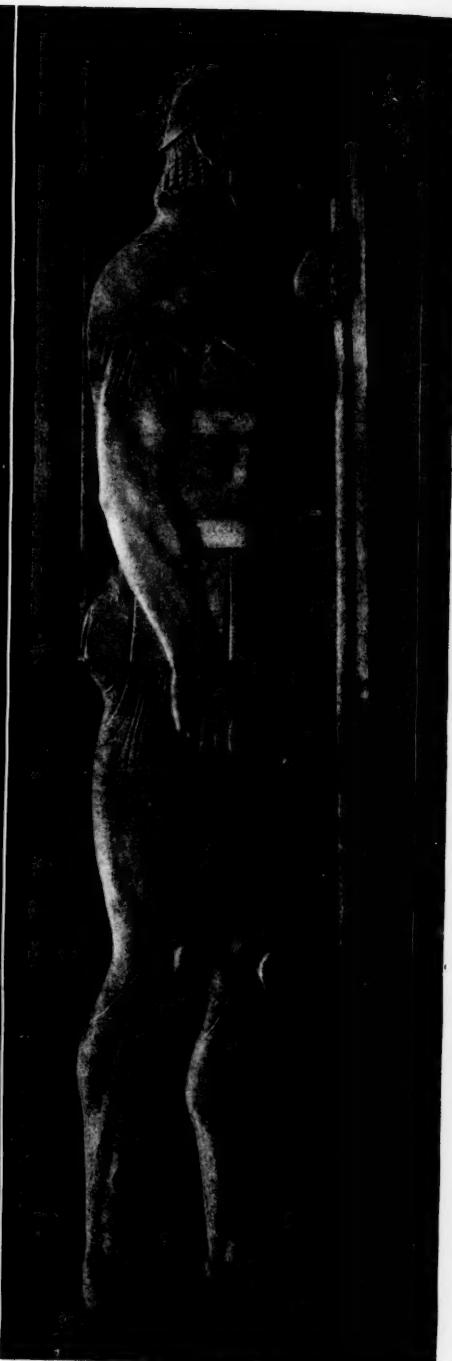


FIG. 2. GRAVE STELA OF ARISTION  
—A SOLDIER

## THE BELIEF OF THE ANCIENT EGYPTIANS, ETRUSCANS AND GREEKS IN THE FUTURE WORLD AS SHOWN BY THEIR STELAE, BURIAL JARS AND GRAVE RELIEFS.

### PART III

#### GREEK GRAVE RELIEFS

**I**N OUR study of the ancient Greeks and Romans we find ourselves constantly making comparisons between them and noting their differences. We compare their efforts in architecture and see how the Romans built large walls; arches and domes of concrete of great extent; and we feel compelled to use constantly superlative adjectives which denote greatness, strength and massiveness. We examine the remains of Greek temples and we are amazed at the perfection, the wonderful finish, the smoothness of the joinings in their blocks of marble, the absolutely perfect harmony of dimensions and parts so that the finished building leaves nothing still to be desired.

In literature we feel this difference and say that the one is more prosaic, more matter-of-fact; the other more poetical, more forceful. In one logical clearness abounds; in the other we are impressed by the rhythm, the beautifully flowing sentences. In all our study of these two ancient peoples we see how the one faces the colder, more practical West; the other faces the warmer, more dreamy East.

Nowhere in all that they did can these distinctions be more perfectly discerned than in their method of expressing the finer, the more subtle realities of life. And in all these perhaps there is nothing more noticeable than their expression of grief, sorrow that comes from death of friends.

There has perhaps been no experience which man is destined to undergo which the painter or sculptor has found so difficult to portray as sorrow. Joy, pleasure, contentment, satisfaction or exultation that comes from an Olympic or Delphic victory—yes, all of these can be pictured in the facial expression. But pain, tears, agony, great grief because of the loss of a loved one, oh, there lies the difficulty. You may paint the death scene with the dying man or woman on the couch and on his face death's agony, surrounded by friends with faces drawn and with tears flowing. This has been done. You may portray the grief of one doomed to an untimely death and represent him as endeavoring to get out of his coffin while grim death stand by to push him back in. This has been done. The Greeks did not and would not do it so.

Can one imagine a sadder moment for a father than that moment when Agamemnon the powerful king stands in the presence of Calchas the priest, who with knife drawn is about to slay the much loved Iphegenia, and he is unable to save her? The Greek army on its way to Troy is detained at Aulis by adverse winds. Diana has been grievously offended by Agamemnon who has been so unfortunate as to slay a stag sacred to the goddess. Diana, angry, sends continuous calms that delay the departure of the fleet



FIG. 3. STELA OF HEGESO

and Calchas, the priest, has announced that nothing less than the sacrifice of Agamemnon's favorite daughter Iphigenia will appease the wrath of the goddess. No wonder the brave leader refuses such conditions and declares he will abandon the expedition before he will consent to so fearful an alternative. Other leaders declare that private feelings must give way to the welfare of the state, and although for a long time Agamemnon turns a deaf ear to their pleadings, at last he is persuaded that it is his duty to make the sacrifice. Iphigenia is summoned by her father who alleges that the great Achilles desires her for his bride. Rejoicing that such an honor is destined for her daughter, Clytemnestra the queen, gladly obeys the command and the daughter is sent. Upon her arrival at Aulis the princess finds no such honor awaiting her but rather that she is to be an unwilling victim of a dreadful fate. In her agony of grief, with sobs and tears, she throws herself at her father's feet and entreats him to have mercy on her and spare her young life.



FIG. 4. GRAVE STELA OF AMEIHOKLEIA

Can one imagine a more difficult scene to paint? How shall the artist picture such awful sorrow as must be that of the father? A great king, yet powerless to save his own daughter. Will tears, and the rending of garments and wild cries tell the sad story best? They may tell it but not best. The Greek would not thus portray the father's woe.

We do not ordinarily turn to the wall paintings of Pompeii when we are seeking beautiful examples of the painter's art. We do not study the many frescoes in the Naples museum from an artistic standpoint. Yet there is one picture there, the illustration of this sacrifice of Iphigenia at Aulis, which is certainly true Greek in its conception. Bad in other ways,



FIG. 5. GRAVE STELA OF IV CENTURY

indeed very bad, in one particular it is a masterpiece. Calchas stands with knife drawn, the beautiful girl is held by two attendants, an instant more and the penalty will have been paid, and the father is there. Such grief cannot be told with tears and drawn face. With true Greek feeling, the artist, whoever he was, has caused the father to stand at one side with back partly turned and head and face covered completely with a veil. Such sorrow is too terrible to be portrayed. It cannot be made public. The indication of such awful grief in the Naples fresco is splendid.

In plastic art the Greeks found the noblest method of expressing sorrow. All peoples have used stones to mark the graves of their dead.



FIG. 6. GRAVE STELA FROM PIRÆUS—IV CENTURY

The ancient Egyptian stela, was, as we have seen, an expression of their belief in the future life and of the needs of the departed. These stelæ found their way from Egypt over into Crete. The Greek sculptors saw them and accepted the idea with many modifications. They took the Egyptian stela, with its representation of the door of the tomb and of the occupant surrounded by slaves and a great feast, and made rather a relief which should show a man's business. He represents him as a soldier, a farmer, a sailor, a potter. The Greeks excelled in this sort of sculpture in the IV century before Christ. From the Kerameikos, by the old Dipylon gate in Athens, have come many splendid specimens. The National Museum in Athens contains the noblest examples and these constitute, perhaps, the most valuable part of a museum rich in splendid examples of the plastic

art. They are not the work of the greatest sculptors, but perhaps it was a Scopas who thus takes up the emotional side of art and makes it popular. Up to this time the Greeks had never represented death and they never did represent a dead figure. Such representations are found in the churches of Europe and they are bad. Recall one such in Paris of a dead man who is lifting up the cover of his coffin and trying to get out while death in the form of a grinning skeleton pushes him back. Beauty is a necessary corollary of art and such representations are not beautiful. All men hate death and we do not love to look on its portrayal whether it be on canvas or in stone. The Greek sculptor said death is an impossible theme and would not attempt it. To carve features emaciated with suffering and representing the pangs of death; to represent a face drawn with weeping and covered with tears, that he would not do. But affection, love, sympathy, that is possible, nay more that is the greatest theme and that can be represented.

Let us examine a few of the finer of the Athenian stelæ that we may better understand the thought of the Greeks in this regard. Two of the simplest of these reliefs represent nothing more than full length male figures, one with helmet and spear, the other leaning on a staff and with a dog by his side. Both are very simple, with little modelling and from the standpoint of sculpture there is much that is bad in both. But though the sculpture is bad the art is good because an idea is shown. In each stela a story is told and told simply but well. What are the stories? One was a soldier, possibly of Marathon, for the stela of Aristion (Fig. 2) as it is inscribed, may well date back to 490 B.C. The other was a farmer (Fig. 1). The old man leans heavily on a staff and playfully teases a dog with a splendidly carved grasshopper which he holds in his right hand. The soldier shows no awful wound which caused his death, no evidence of death's agony endured on the field of battle; the farmer shows no trace of sickness or pain. Both stelæ tell simply the occupation of the man. Similarly there may be seen in the ancient burying ground by the Dipylon gate in Athens an equestrian relief of Dexileos, a young Athenian who distinguished himself by his valor in the Corinthian war in the early part of the IV century B.C., and who lost his life in the very midst of the fight. The relief represents him on horseback in the act of striking down an enemy. In the same place may be seen also in situ, the stela of Hegeso, a rich young woman of the same period who is represented at her toilet, attended by a maid (Fig. 3). Most of these stelæ that we are studying were made for families of wealth, and the scene of the lady at her toilet, with her jewel case, is a common one. In the relief last mentioned the maid has brought a jewel casket and Hegeso takes out the jewels one by one and admires them, and, as it were, is about to select the one with which she will adorn herself. The relief figured in our illustration (Fig. 4) is one of the finest of this kind. Every morning it has been this lady's custom to put on her sandals, adorn herself with her jewels and go out for a walk. This relief pictures her as prepared again for a journey but this time it is the long last journey. One maid has run forward, stooped down, and begun to fasten the sandals as has been her wont each morning, when the

mistress reaches forward her hand to her as if to say "Yes once more you may put them on but to-day for the last time. I will not need them again." Another maid has brought, as has been her duty each day, the jewels, but this time instead of admiring all and choosing one she rejects the proffered jewel case and seems to say "Not to-day, I have no further need of jewels, take them back."



FIG. 7. GRAVE STELA FOUND AT ILISSUS

The most common method taken for the expression of true love and sympathy and grief is to represent the lady who is dead as shaking hands with members of the family and sometimes as giving an admonition. In time of bereavement, to-day, which friend brings to us real help and comfort—

the one who rushes into the house of mourning with many words of sympathy accompanied with many tears, or the one who comes with heart and voice too full of sorrow and sympathy for utterance, but who reaches out the hand and with warm pressure imparts true love and truest sympathy?

How fully these old Greeks of the IV century knew this! One of the finest examples of this class of stelæ we illustrate in figure 5. The woman who is dead stands in front of the seated one. With the left hand she takes not the hand merely, but the wrist of the other, who is perhaps a daughter. With the right hand she tenderly touches the face of the other while she gives admonition about the proper training of the younger girl who stands in the back-ground. Oh, the depth of love and tenderness that goes forth in the simple gesture! But on neither of these faces is there evidence of great sorrow.

One other of this type is so beautiful that it deserves representation (Fig. 6). Here the child is introduced. Here is mystery. The babe tightly wrapped in its swaddling clothes tells plainly that the mother has given her life that the little one might live. With a look of love belonging only to a mother, but with no tears, the babe is tenderly handed over to the sister (or is it to an older daughter?) with the admonition that she look after the rearing of the baby tenderly and well.

There are many such reliefs. There is great similarity in some of them. All are full of meaning. All represent the dead person as doing that which they took delight in when on earth; the little boy rolls the hoop, or plays with his dog. The little girl plays with her bird or her kitten. The man follows the occupation that he loved when alive.

There are two others which are so different and so forcefully tell their story that we turn to them. In figure 7 is represented a nude figure of a young man, in front of whom stands an aged man. This is not the portrayal of the death of an athlete as might at first be thought. Here is rather depicted an allegory. A subtle explanation is required. The youth's garment hangs upon his arm. He has shuffled off the mortal coil, his garment, and thus is death indicated. The attitude of the child and the position of the dog at his feet indicate death. What is the story? An aged father has lost his son. It is an awful thing for a parent to lose his son. It is contrary to nature. The son ought to survive the father. The Greeks felt this keenly. Medea could plan no punishment more cruel for the faithless Jason than the murder of his two little sons. Aged king Evander, who has sent his beloved son Pallas to the aid of Æneas against Turnus thus cries out when he is called upon to mourn over the body of his boy brought back slain in battle. "Thou most holy partner of my bed, happy in thy death, and not to this woe reserved; while I by living on have overpassed my natural bounds to remain a childless father." (*Verg. Aen. XI, 160.*)

So in this relief the father stands very sad, but there is no attempt to represent paroxysms of grief.

There is a second relief (Fig. 8) not unlike this one in that there is a figure of a youth and an aged man. The story, however, differs. Again the son has died before the father. But death for a young man is a great



FIG. 8. GRAVE STELA OF IV CENTURY

calamity, though afterwards welcomed by the aged. Here the son indicates his grief at the calamity which has befallen him in his untimely death. The aged father, though left alone without the strong arm of his son to lean upon, though weighed down with a sense of his own grief, yet does not give way to that but rather tries to offer comfort to the son in his grief.

All of these Athenian funeral steleæ throw side lights upon the Athenian character. Not all are as well done as these we have been examining but there are none common or vulgar.

We should be glad to say the same thing about the Romans, and their thought along this line. Unhappily we cannot. How different was their feeling! How different from the grave stèleæ of the Greeks were the hugh stone sarcophagi of the Romans! It was as if when the Romans had conquered the Athenians and had seen their cemeteries with their simple

reliefs they despised their simplicity. The Roman parvenu, desiring to show his wealth rather than his love, built at Rome the great tombs which even to-day remain upon the Appian and other important roads, displaying "his love or his pride." He is now the conquerer of Athens. No simple relief will be sufficient to adorn his family lot in the cemetery. He needs a stone and he orders a great stone sarcophagus. He instructs the sculptor to cut upon it a pretty picture. What shall it be? "Oh, I don't know, anything only let it be showy. Anything so long as it is expensive—a boar hunt, drunken cupids, Bacchanalian scenes—never mind what, a pretty picture" (Fig. 9). It matters not that these scenes are irrelevant; that they have nothing to do with the thought of death or of the hereafter. How terrible the difference! How sad the downfall from the Greek relief to the Roman sarcophagus!

EDWARD W. CLARK.

Rome, Italy.

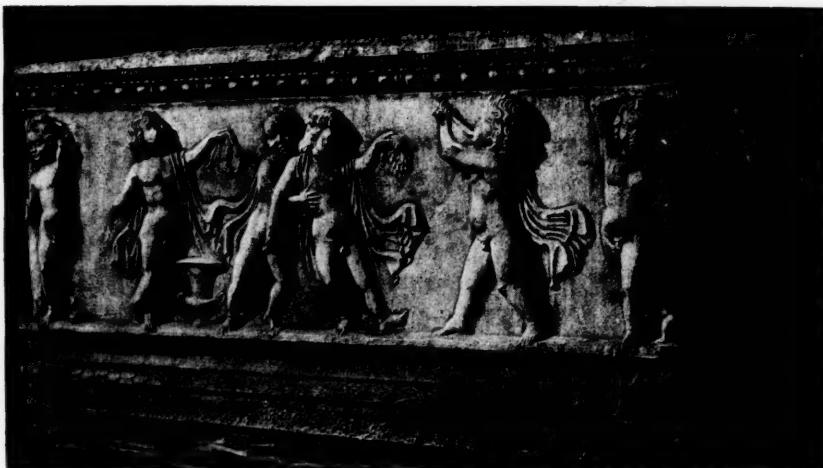


FIG. 9. A ROMAN SARCOPHAGUS



## THE COINS OF ANTONINUS PIUS

### THIRD PAPER

**T**OWARD the close of the year 139 A. D., Antoninus had been Consul Elect for the Third Time, yet it is a surprise to find no intimation of the new honor upon the coins. The Second Consulship had been abundantly heralded and so also shall we find his fourth, but the third seems to have escaped numismatic announcement. We nowhere discover the monetary inscription COS. DES. III. Unprefaced, the coins of 140 lead off with COS. III.

At once a perplexity is opened before us. There were 5 intervening years before the Emperor assumed a fourth Consulship, yet, meanwhile, in accordance with epigraphic canons, he continued to be styled COS. III. This would not be so disconcerting if Antoninus had only felt inclined to designate his Tribuneships, which, of course, were renewed annually and whose number therefore was increased by one each year. But he made no regular practice of enumerating his Tribunicia Potestas until it was time for XI., consequently, with rare exceptions, the coins from 140 to 145 A. D. contain no internal evidence for definite dating until late in 144, when COS. DES. IIIII. began to appear. Unfortunately too, very slight extraneous help can be obtained from history or biography, as the reign of Antoninus was a singularly tranquil one for Rome. Little of moment occurred to disturb the general trend. Little else than routine and ritual alone was available out of which to evoke inspiration for monetary types.

The opening of 140 A. D. found Type 7, the shorter legend of 4 names, fully established upon the obverse. As a natural result, the new honor of the third Consulship, together with such other official titles as were selected, gravitated, after the old style, to the reverse. But from this list we are soon to lose entirely the Pontifical title, the infrequency of which during the preceding year has been already remarked. Two additional mintages yet to be chronicled,—and the Pontifex Maximus vanishes from Roman money, not to reappear until after the accession of Marcus Aurelius.

In the face of a decided religious trend, under the influence of which, as we shall discover, Antoninus's favorite type of reverse was that in honor of the various deities, the paradox of the scouted Pontifical title is all the more inexplicable. One might have expected such an attitude from Trajan the warrior or from Hadrian the traveler, but both these Emperors had rarely omitted the title. So bold a departure as wholly to dispense with it, we would hardly have surmised from an Imperator of Antoninus's disposition, whom we are to find veritably 'the Numa of the Empire.' Did some incident occur shortly after the beginning of his administration, leading him to scorn the sacerdotal honor? Was this sincerely plain man above the wiles and devices of the priesthood? Or was this no new sentiment on the part of Antoninus, but a long-established conviction? In the latter event, either the Imperator's attention was elsewhere directed at the outset of his reign, so that his moneymen proceeded without interference, or

else,—and this is more likely, he may have deemed it expedient, for the establishment of his régime, to consent to a short lease of honor for the title.

The two bronze medals now to be mentioned are therefore of considerable interest, in that they contain the rare Pontifical honor. The first of these has an inscription modeled after one of the formulae of 139:<sup>1</sup>

P. M. TR. P. COS. III.,

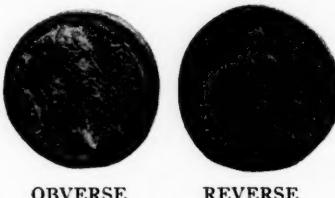
its device placing it with the famous Aeneas group. It is the scene which popular fancy elected as allegorizing both the origin of the Roman race and the accepted reputation of the present Emperor,—the escape from Troy, the hero in the act of carrying Anchises and leading Ascanius by the hand.

The second of the two medallions, a fine specimen withal, contains the spirited device of the Emperor on horseback, and the sole inscription:<sup>2</sup>

PONT. MAX.

a type of formula that had not been seen since the days of Otho and Vitellius.

The elimination of P. M. leaves the familiar pair, the Tribunician and Consular titles, expressed variously upon the reverse, according to the abbreviation employed for the former. The type with longer formula for the Tribunician power, thus:<sup>3</sup>



OBVERSE

REVERSE

TR. POT. COS. III.,

has more examples. Coin no. 2 of the original group illustrated in the first paper of this series and herewith reproduced, belongs to this type—a type widely employed, embracing issues of every metal and size and numerous devices. The present coin is a *dupondius*, if the laureated portrait can be understood to designate that value of 'middle bronze' at this period of the Empire. The method of minting is suggested in the illustration, for the round rim of the die is clearly shown on the obverse, where it leaves beyond it on the right a margin of something like  $\frac{1}{16}$  in. The portrait is thus thrown to the left of the center and the corresponding portion of the legend is crowded quite close to the edge of the coin.

The portrait itself, in right profile and laureated, is excellently well preserved, one of the best in the group.<sup>4</sup> It will be noticed that the adoption of the shorter formula introduces a less rigid disposition of the letters that compose the legend of the obverse. Compactness is no longer essen-

<sup>1</sup> Akerman, p. 262, no. 16.

<sup>2</sup> Akerman, p. 262, no. 18.

<sup>3</sup> Eckhel, p. 16.

<sup>4</sup> Cf. RECORDS OF THE PAST, Jan.-Feb. issue, pp. 24, 25.

tial, as was, for instance, the case with Trajan's legends. Antoninus's formulae are now very often given almost awkward spacing between words and even syllables, as may be observed in the division of the *cognomen* in coin no. 1 of the group,<sup>4</sup> or of the name PI—VS in the second coin illustrated in this paper. In our present coin, the legend falls into two parts, one on the left, the other on the right, of the portrait. Happily, there is no violent syllabification in this instance—the name ANTONINVS occupying the whole left margin with resultantly neat effect.

The device of the reverse is a draped female figure, standing, partly turned to the left, her left hand clasping and drawing her drapery somewhat tightly to the right across the lower limbs, and extending in her right hand a sprig or twig. The figure suggests the popular allegory of Hope; if so, the object she holds daintily between thumb and finger is a half-blown flower.

Several issues of this same type of reverse-inscription were among the most noteworthy mintages of the reign. One, a gold piece,<sup>5</sup> which may belong to the opening days of the year 140, represents the Imperator driving a four-horse chariot, with two small figures beside him. They are doubtless the cousins, his own adopted sons and successors, Marcus Aurelius and Lucius Verus. Aurelius was now upwards of 20 years old and Verus in his early teens, but both are here given that diminutive size, so familiar in Greek and Roman perspective, with which it was sought to distinguish inferiors in age or station from their protagonists.

Effort has been made to fix this coin as commemorative of the victories in Britain. But, in that case, the device could only be interpreted as indicating a triumphal procession, a suggestion directly refuted by the statement of the biographer, that Antoninus denied himself the honors of a *triumphator*. Moreover, those coins of the reign which signalize the British War usually have a more defining sign, such as the title IMP. II., or some form of the name BRITANNIA, as will be shown in a subsequent paper. Therefore, all that may be said of this coin is that it represents some ceremonial procession of a more ordinary character, perhaps in honor of the new Consulship.

An interesting companion to this last coin is a gold piece with practically the same device, but with the inscription inverted, reading:<sup>6</sup>

#### COS. III. TR. POT.

This is a unique departure from the customary placing of the two honors, which gave precedence to the Tribunician power. While Antoninus himself seldom departed from the rule, the rare exceptions give added weight to the suggestion that the Emperor, especially during the first few years of his reign, actually did so rank them in his own mind. He was Consul for three terms consecutively. He omitted to number his Tribuneships systematically until 10 had passed. We shall find him for 5 years, beginning with this same year 140, employing legends upon the obverse in which the Consulship appears alone without the Tribuneship, while it was not

<sup>4</sup>Eckhel, p. 16

<sup>5</sup>Akerman, p. 256, no. 12.

until 145 that a similar deference toward the Tribunicia Potestas attained prominence. It was not until the latter half of his reign that a decided change came, when the Consulship ceased to appear alone upon the obverse. Did it mean that the Emperor's earlier convictions were averse to the idea of the Tribunician power? Did he scorn the origin of this honor, which had meant the assumption of the powers without the real name? The old aristocratic Consulship may have meant more to him than the stolen honors of the plebeian Tribuneship. In other words, we may have here added evidence of the Emperor's undisguised and unassuming sincerity,—the same which had prompted him to deny triumphal honors, to decry the radiate crown, and to renounce the Pontifical title.

Returning to the reverses with the more usual inscription, TR. POT. COS. III., there was one notable coin in gold,<sup>7</sup> representing the Emperor seated on an estrade, or raised tribunal, surrounded by attendants, with two figures below, the latter evidently representing the populace. The coin was doubtless some memorial having reference to the judicial and administrative duties of the Imperator.

The impossibility of giving chronological classification to the majority of the mintages now under discussion is somewhat compensated for by the realization that, during this otherwise colorless *quinquennium* of the third Consulship, Antoninus came at last to develop his true ideals in coinage, only slight evidences of which, it must be confessed, had been particularly apparent thus far. Aside from the rather interesting disposal of his personal names in the longer legend and his later persistence in the shorter name, Antoninus's coins had hitherto displayed no very marked individuality. There is room even for a charge of indifference or, at least, of inattention. We must, however, remember, before passing judgment, that Antoninus had little more than fulfilled one year since the Principate had been thrust upon him by the terms of his adoption. It may be well questioned whether the new Imperator, amid the press of state business, had as yet been privileged to devote any large amount of time to numismatic duties. For instance, the successive acquisitions, decidedly important ones at that, of Pius and Pater Patriæ had for some time been merely appended, as severally decreed, to the stereotyped coins of previous issues, and, to aggravate the case, had been placed upon the reverse. And as for the inscriptions of the reverse, with an exception or two, these had mainly been of the more prosaic type, the recapitulation of civic and religious honors in the order of preferment and award.

The Senate too, if indeed that body had been independent in its mintages, while displaying a greater variety in designs and, perhaps, truer adherence to the canons of etiquette as regards the disposal of certain titles, had chiefly plagiarized the issues of previous reigns. Such, for example, were the so-called 'geographical' bronzes, which were, in great part, modeled after Hadrian's 'Provinces' and the LIBERALITAS, which but repeated the CONGIARIA of former Princes. But, on the other hand, it was a bronze medal that had published the brilliant metaphor of Antoninus as 'The Pious Æneas', a splendid compensation for all the replicas.

<sup>7</sup>Akerman, p. 258, no. 50.

But, from now on, we are to witness greater variety, more originality, and, latterly, a decided individuality in taste and selection. It is indeed a most significant fact, that no era in the chronicles of the Empire could have been more admirably adapted to display the style of man than that which had now dawned upon the Roman world. A man of peace in times of peace,—no serious wars to disturb the general tranquillity,—no political broils to harass a perfect equilibrium,—harmony, contentment, prosperity prevailing for a quarter of a century,—such were the conditions under which the coinage of Antoninus Pius was evolved. Time and the man were in full cadence. The man was given uninterrupted opportunity to pursue his own proclivities. And so, the types of money which now began to appear were beautifully consistent with the Imperator as a man.

Moreover, if all the other records of the reign were wanting, if the annals of Cassius Dio, the *Augustan History* of Capitolinus, the *Meditations* of Marcus Aurelius had all gone the way of Livy's lost 'dekads' or of Calvus's lamented lyrics,—still we should have sufficient testimony in Antonine's coins, when read in the benignant light of his portrait busts, from which to reconstruct his life. And it is from his coins struck during these 5 years of his Third Consulship,—perhaps his first period of real complacency after mastering the details of Empire, that we can read what style of man was this Titus *Aelius* Antoninus.

He was Pius truly, in that more modern, more extended connotation of the word, 'Pious.' But just here, one of those strange lapses in biography, one of the 'sins of omission' of which the historian is sometimes guilty, is detected through the science of numismatics. One lone anecdote from the rambling pen of Pausanias the Periegete, one solitary inscription garnered by Fabretti, were all that had borne stinted testimony to a neglected phase in the comprehension of Antoninus's true character,—the peculiar trend of his religious observances. It was particularly the 'old-time religion,' the worship of the heroes of the nation's infancy that fascinated him, the cults that were cherished out in the hills and in the by-ways, the rituals that survived only in folk-lore and in cob-webbed corners of ancient libraries. Apollo in his Palatine courts, Venus and Rome in Hadrian's new wonder on the Velia, the lordly Triad of the Capitolium, the newer mysteries of Isis and Mithras—none of these so appealed to the Antonine as the fast-disappearing names that had prevailed when Tatius and Numa were Patriarch and Pontiff. Deities whose shrines were woe-begone pictures of deserted sanctity, whose images were dust and whose *pulvinaria* the haunts of stork and crow,—divinities whose very names were obsolete and involved problems in etymology and orthography,—were elicited from the shades of forgotten centuries and now given a place on the national currency. Thus it is, that the antiquities of Vergil and Varro and Dionysius are often and again intelligible through the aid of a medal or 'first brass' whose obverse carries a talisman in the name ANTONINVS.PIVS. Our knowledge of Roman religion would be crippled without the commentary afforded us in the coins of this reign, while such works as the '*Fasti*' of Ovid are vivified by the illustrations derived therefrom.

Victories and Provinces, Donatives and Armies, Fortunas and Adlocutions, Consecrations and Providences, Expeditions and Returns, Vows and Remissions, Restorations and Constructions, Decrees and the Giving of Kings, all sorts of Romas and S.P.Q.R.s and abstract Virtues, had hitherto thriven on the Imperial coinage; but, never before, as in one mighty Pantheon, had the Roman world beheld such an array of Gods and Goddesses, Demigods and Deifications, as began now to be scattered broadcast in the coins of Antoninus Pius.

Such, to enter more explicitly into the catalogue, were a 'first' and 'second brass'<sup>8</sup> with the same short formula of 4 names upon the obverse and the quite frequent TR.POT.COS.III. upon the reverse. Its device was the double-faced Janus—'Janus Bifrons,' as the Romans styled him. Though there can be no clue now as to what particular year within this period the coin belongs, this figure of the primitive god standing, with spear in his right hand, the god of beginnings, from whom January itself took its name, may well have been assumed by Antoninus as typifying, not merely the beginning of the new year, but,—a matter of much greater moment, the inaugural days of his Third Consulship. Janus was altogether appropriate too as a herald of that procession of gods and goddesses that accompanied him. In the old Republican days, he had been as familiar a figure on Roman money as was recently the Indian head on American pennies; but, since the adoption of the new currency under the Principate, he had been almost forgotten, until first Hadrian and now Antoninus in imitation placed him again in every one's hands. With Antoninus, it was undoubtedly an example of that antiquarian enthusiasm which was so to color his money throughout his whole reign.

But, even if bi-frontaled Janus were not the herald, the splendid procession of the deities and heroes had started. Antoninus's coins became a novel sort of *lectisternium*, in which the gods were veritably couched within the palms of the Quirites and the heroes within their calling. Antoninus, with the Senate as close second, seemed now to be designing coins from the open *Aeneid* or Livy's first dekad. No better commentary was needed.

Still with the inscription TR.POT.COS.III., a gold piece<sup>9</sup> began at the very fountain head of the story, the *Aeneas*-myth,—only it was the simpler device of the flight from Troy, the one group only, *Aeneas* with his father on his shoulders and his boy by the hand.

A favorite coin,<sup>10</sup> issued first in gold and silver and copied by the Senate in 'middle bronze,'—all of them with the legend of 4 names on the obverse and the Tribunician-Consular formula on the reverse, though the gold issue had TRIB. instead of TR., pictures 'Mars Auctor,' spear in hand and shield on arm, descending from the skies on the left, while, on the right, below, Ilia, 'princess and priestess,' lies sleeping. It is a detail of the same scene so recently unearthed from the lava of Herculaneum. It

<sup>8</sup> Eckhel, p. 16; Akerman, p. 269, no. 45, and p. 271, no. 22.

<sup>9</sup> Akerman, p. 259, no. 51.

<sup>10</sup> Eckhel, p. 31; Akerman, p. 259, no. 52; Plate vi, no. 10; and p. 271, no. 23. Duruy's *History of Rome*, vol. i, p. 141, also reproduces the gold coin.

is all the poets from 'Father Ennius' down, compressed upon a piece of money. It is the genesis of the Roman race, as eloquently told as by Dionysius himself.

Some silver pieces of the same legend and inscription, imitated in 'first' and 'second brass,' of several styles of both obverse and reverse, were souvenirs of the Lupercalia.<sup>11</sup> In some, the historic cave was distinctly shown, but, in all, the wolf was depicted, nursing Romulus and his twin. In some of the bronzes, there was an added detail,—a diminutive shell-like boat in the lower foreground,—the 'basket' in which Ilia's boys were exposed to the mercy of 'Father Tiber.'

And here, on a 'second brass,' surrounded by the inscription:<sup>12</sup>

TIBERIS.TR.POT.COS.III.

i.e., the same inscription with TIBERIS prefixed, is 'Father Tiber' himself 'to whom the Romans pray.' Practically the same attitude is repeated on a 'first brass'<sup>13</sup> and on a brass medallion,<sup>14</sup> though both these latter omit the honors, having simply TIBERIS. The venerable river-god who aided Aeneas in his quest, fathered the twin-boys of Mars, and received to his bosom the hapless mother, is represented, to quote Stevenson,<sup>15</sup> "seated on the ground,—his right hand placed on a boat, and his left, reposing on an urn, holds a reed."

An interesting variant in the inscription of the reverse was its reduction to the simple COS.III., a favorite apparently, despite the fact that, with an obverse of Type 7, the Tribunician title was thus expunged from both faces of the coin. There was a medallion,<sup>16</sup> reproduced also in a bronze of the smallest size,<sup>17</sup> having this style of reverse, but retaining the same formula of 4 factors on its obverse, whose device, replica of a coin of Hadrian's was, so to speak, a metonymy of the Capitolium. The three birds that were sacred to the three several deities, were arranged in an order that was significant of their respective rank and the relative position of the cellas in the temple itself. Jupiter's eagle occupied the center, while Minerva's owl stood in the place of honor on the king-bird's right, with Juno's peacock on his left. A coin is thus found to be corroborative of the rather scant literature upon the subject,—that Juno was ranked below the helmeted goddess. No wonder there was irony in her voice when she exclaimed:<sup>18</sup>

'Ast ego quae divom incedo regina Jovisque  
Et soror et coniunx—.'

[But I who move Queen of the gods, Jove's sister  
and his spouse.—Cranch's translation.]

<sup>11</sup> Eckhel, p. 31; Akerman, p. 259, nos. 53 and 54.

<sup>12</sup> Akerman, p. 271, no. 21.

<sup>13</sup> Akerman, p. 269, no. 43.

<sup>14</sup> Akerman, p. 262, no. 22.

<sup>15</sup> Stevenson, p. 792.

<sup>16</sup> Stevenson shows a cut, p. 487.

<sup>17</sup> Eckhel, p. 33; Akerman, p. 272, no. 4.

<sup>18</sup> Vergil, *Aeneid*, I, 46, 47.

A bronze medallion,<sup>19</sup> one of the large kind with a wide circle, and having COS.III. for its inscription, depicted Æsculapius, the god of medicine. A 'first brass'<sup>20</sup> with this same COS.III. represented the Emperor, again seated on an estrade, flanked by other figures, much as on a coin previously described in this paper,<sup>21</sup> and here interpreted as the Prætorian Prefect and the personification of Liberalitas; a figure clad in the toga stands below, the whole seeming to represent an act of public beneficence. Another 'first brass'<sup>22</sup> with like inscription had for its device 4 infants, representing the 'four Seasons.' A 'second brass'<sup>23</sup> shows 'the infant Jupiter riding on a goat,'—a suggestion of the myths of Amalthea and the Curetes.

This same COS.III., by reason of its brevity, was a favorite inscription for 'third brasses.' Of these there were several,—one<sup>24</sup> showing a 'modius, containing several ears of corn',—another<sup>25</sup> 'two capricorns, on a globe.'

On page 64 of Stevenson's *Dictionary of Roman Coins* there is reproduced and described, after Pedrusi, the reverse of a most interesting bronze medallion which may belong here. It presents Apollo with several of his attributes. The god, standing and facing us, occupies the center of the medal, his *pallium* clasped on his right shoulder but hanging down his back. His bow is held forward in his left hand, while his right seems to grasp the thong of what may be the quiver resting loosely on the ground. A dead serpent lies coiled in and out of a tripod on the right,—all certainly proving that it is Apollo, the slayer of the Python, who is here commemorated. A table on the left, *i.e.*, on Apollo's right, has a vase upon it, while a tree that rises behind it and throws out a long branch over Apollo's head, has the god's sacred bird, the crow, perched upon one of its branches. The inscription on the right, gracefully corresponding to the tree on the left, is a decidedly unique one, reading:

TR.POT.III.COS.II.

It would be an interesting one, if only for the fact that it is one of the rare instances wherein Antoninus numbered the Tribuneships of his first dekad. But, unless there was some error in the original die, or in Pedrusi's copy, or in Stevenson's transcript, the formula is inexplicable. Antoninus's first Tribunicia Potestas, as we have seen, was conferred upon him at the time of his adoption. In November of that same year, 138 A. D., a few months after his accession as sole Imperator, he began his second Tribuneship, following the practice, throughout the remainder of his reign, of renewing the TR.P. annually on that same date. A glance at the table below will at once reveal the impossibility of a combination of title such as that expressed on the coin.

<sup>19</sup> Akerman, p. 260, no. 5.

<sup>20</sup> Akerman, p. 267, no. 14.

<sup>21</sup> Cf. p. 216.

<sup>22</sup> Akerman, p. 267, no. 15.

<sup>23</sup> Akerman, p. 270, no. 7.

<sup>24</sup> Akerman, p. 272, no. 2.

<sup>25</sup> Akerman, p. 272, no. 3.

July, 138.....	TR.P.I.....	COS.I.
November, 138.....	TR.P.II.....	COS.I.
January, 139.....	TR.P.II.....	COS.II.
November, 139.....	TR.P.III.....	COS.II.
January, 140.....	TR.P.III.....	COS.III.
November, 140.....	TR.P.III.....	COS.III.

An error in one of the numerals is obvious, more probably in that of the Consulship, for the closing strokes of an inscription are often vague, while the central lettering, even when indistinct, may frequently be conjectured by reference to the space occupied. The formula here is very probably meant to be:—

TR.POT.III.COS.III.,

a dating which could fall as early as November of 140 and anywhere before November of 141.

It must be reiterated, that the coins of the third Consulship thus far detailed, were, in general, those that had the simple legend of 4 names upon the obverse,—Type 7. But reference to the tables given in the second paper of this series<sup>26</sup> will show that there were several variant types of the obverse, employed contemporaneously with those of Type 7, one of which, Type 8, had been introduced during the year 139 and was now to assume a preponderating importance. Five others, Types 10-14, were inaugurated and flourished during the *quinquennium* of the third Consulship, one of them, Type 14, being destined to survive the others and run parallel with Types 7 and 8 for several years into the Fourth Consulship.

Of the four types which were essayed during these 5 years only, but which apparently did not again come into use, two, Types 12 and 13, seem not to have obtained the popularity of their contemporaries, and, by reason of their rarity, may be despatched at once. The first of these, Type 12, which was probably employed in silver coinage only and has been found with laureated protraits alone, was denoted by the mere addition of COS.III. to the shorter formula (Type 7), with this resultant legend for the obverse:<sup>27</sup>

ANTONINVS. AVG. PIVS.P.P.COS.III.

The second, Type 13, used only in the large bronze, and also belonging to the purely laureated variety, exchanged the position of the two last titles, inserting COS.III. before P.P. and reading thus:<sup>28</sup>

ANTONINVS.AVG.PIVS.COS.III.P.P.

Type 13 was thus the only formula as far as employed by Antoninus, which separated PIVS from P.P. on the same face of the coin, though there were occasional mintages, as already witnessed in the discussion, in which the two titles were divided between the two faces.

<sup>26</sup> Cf. RECORDS OF THE PAST, Mar.-Apr. issue, pp. 85, 86.

<sup>27</sup> Eckhel, p. 12, C.

<sup>28</sup> Eckhel, p. 12, D.

Both these latter types are rather interesting, in seeming to voice the attitude which the Emperor at this time may have entertained toward the Consulship, for both obtained their legends by appending or interpolating the Consular title alone, a distinction which Antoninus did not accord the Tribunicia Potestas, after its first uncertain use in 139, until 148 A. D., when, as our Type 9, it became popular.

A third type that was peculiar alone to the period of the Third Consulship was Type 10, distinguished as the shortest of all the new styles, the formula which dispensed with P.P. upon the obverse and thus read:<sup>29</sup>

ANTONINVS.AVGVSTVS.PIVS.,

and even this was sometimes shortened by the abbreviation of the second title to AVG.<sup>30</sup> It was an infrequent type, though the few coins that belong to it are among the most famous of the reign. As might at once be conjectured, the Pater Patriæ was too precious a title to be lightly omitted and its absence from the obverse was compensated for by the ranking position on the reverse. Thus was evolved an inscription for the reverse reading:—

P.P.TR.POT.COS.III.

The most popular coin that passes under the name of Antoninus Pius, if the number of reproductions in current literature can be taken as a criterion, though it is of course the device of the coin that has caused its popularity, is a bronze medallion<sup>31</sup> of this last-named Type 10 and with the last-mentioned inscription on its reverse. It is the oft-recurrent group of figures in the act of flight from Troy,—the ‘eugenics’ of Rome, already noted as a favorite theme on Antonine’s coins and the stereotyped allegory of the Emperor’s own ‘pietas.’ Æneas is depicted as a typical war-clad figure of the Imperial age—his cuirass and *paludamentum* and beard rather suggesting that a portrait of Antoninus himself as ‘Feldherr’ is here really intended. He strides to the right, but looks back to the left, grasping the boy Ascanius not by the hand, but high up by the arm, as if thus to facilitate the little fellow’s ‘unequal strides.’ The aged Anchises, with a cloak drawn over his head, is perched upon the hero’s left shoulder, steadyng himself by resting a hand upon his son’s other shoulder, for in his own left he carries a casket, containing, perhaps the Penates, but hardly the Palladium, of Troy.

The reverse, in all its details, was a duplicate of the gold piece already described in this paper,<sup>32</sup> in which, however, the inscription was not introduced by P.P., but by P.M., for the gold coin belongs to Type 7, wherein P.P. was a regular part of the obverse legend. These two were again replicated upon a ‘first brass,’ only the inscription here reads:<sup>33</sup>

TR.POT.COS.III.P.P.

<sup>29</sup> Eckhel does not list this style of obverse.

<sup>30</sup> Akerman, p. 254.

<sup>31</sup> Ramsay and Lanciani’s *Manual of Roman Antiquities* gives a cut of this entire coin; p. 467; Stevenson, the reverse only, p. 16; cf. also Duruy’s *History of Rome*, vol. i, p. 140.

<sup>32</sup> Cf. p. 216.

<sup>33</sup> Akerman, p. 269, no. 44.

It is a formula that seems to stand alone, for no other has been found to correspond. After the persistence with which the Senate had resisted Antoninus's own wayward practice of treating P.P. as an appendage of the reverse, this exception is decidedly interesting.

Type 8, the variant introduced during the previous year by the addition of both the civic honors, the former without numeral, although it had but a modest reception during 139, came to supersede even the shorter formula in frequency and popularity. By far the most interesting coins of the entire Third Consulship are with the obverse legend:<sup>34</sup>

ANTONINVS.AVG.PIVS.P.P.TR.P.COS.III.

These continued the old alternate system of portraiture and were in all metals and of every size.

An advantage was at once imparted to the reverse. It will have been noticed that the natural result of the exclusion of official titles from the obverse, as in coins of Type 7, was the evolution of a reverse-inscription which counterbalanced these omissions. The reverses, therefore, which have thus far been detailed, have contained those official honors in part, or *in toto*, or in combination with other matter. But those variants of the obverse which assumed some or all of the official titles, left greater liberty for the reverse. The latter, accordingly, was no longer obliged to carry such formulæ as TR.POT.COS.III. or COS.III. alone. Device and inscription could now correspond, for, when the burden of titles had been thrust, as formerly, upon the reverse, the device was left to tell its own story. That story was no doubt intelligible always at the period of its coinage, but often the full import or even the proper ascription of name has quite eluded us of this latter day. With the removal of the official titles to the obverse, we shall find the device of the reverse interpreted for us in the inscription. Allegorical figures, personifications, and deities are thus formally introduced to us and not made to depend upon an emblem or attribute which time has perhaps erased from the coin.

Thus, in both silver and gold,<sup>35</sup> and reproduced upon the 'first brass,'<sup>36</sup> with, of course, the addition of S.C., stands Actian Apollo, in his feminine robe, with the sacrificial *patera* in his right hand and the lyre in his left. But, even should the lyre have escaped us, there is the inscription to put us aright:<sup>37</sup>

APOLLINI.AVGVSTO.

'To Augustan Apollo.' This is not the ordinary Apollo, but, true to Antoninus's patriotism and antiquarian spirit, the Apollo who stood upon the prow of Octavian's ship at Actium and was thereafter incarnated, as it were, in the Augustus himself.

<sup>34</sup> Eckhel, p. 12, A.

<sup>35</sup> Akerman, p. 255, no. 2.

<sup>36</sup> Akerman, p. 266, no. 4.

<sup>37</sup> Eckhel, p. 13.

Without the aid of the inscription:<sup>38</sup>

OPI.AVG.,

'To the Augustan Ops,' we might fail altogether to recognize the ancient goddess Ops in the figure of the seated woman, holding a spear in her right hand, and with her left hand upraised to her head. Ops, Saturn's queen in the 'Golden Age,' the personification of wealth, prosperity, and felicity, and identified with 'Mother Earth,' was a particularly happy device for Antoninus Pius. Truly was she 'Augustan Ops,'—the Emperor's presiding genius. So Ops appeared upon the Imperial silver money<sup>39</sup> and the Senate reproduced the device upon the 'first brass.'<sup>40</sup>

A third title in which was included the adjective 'Augustan' or 'Imperial,' and expressed, as in those just given, in the dative case, was:

ROMVLO.AVGVSTO.

By this epithet, Antoninus himself is thought to be meant,—another Romulus, the Augustan Romulus, re-founder of Rome in prosperity, in the restoration of the old order, in the revival of the old gods, and the reconstruction of ancient history. Romulus Augustus, a military figure striding to the right, with spear slanted forward in the right hand, and a trophy, perhaps the 'spolia opima,' over the left shoulder, was expressed first in gold<sup>41</sup> and thereafter in 'first'<sup>42</sup> and 'middle brass.'<sup>43</sup> There were also coins<sup>44</sup> of the latter denomination belonging to our Type 7 which had this same device of the Imperial Romulus, though attended by the inscription appropriate to the reverses of that type.

Among the ancient cults that found reverential commemoration on the coins of the reign was that of Juno of Lanuvium, of especial interest to Antoninus because he had been born in his father's villa in the vicinity of this Juno's famous shrine. The Emperor remained true to the ancient deity of his boyhood and there is even record of his having built or restored a temple to her during his Imperium.

IVNONI.SOSPITAE,

'To Juno the Preserver,' on the 'large bronze,'<sup>45</sup> expressed a genuine and sincere reverence. The goddess looks every whit able to act the "Preserver," for she stands like the Athene Promachus of the Acropolis, with shield on arm, lance poised, helmet of a goat-head with horns, and the serpent upraised at her feet.

A medal<sup>46</sup> of this same type of obverse, Type 8, told the sacred legend of how Æsculapius came to Rome—"the only production of the Roman

<sup>38</sup> Eckhel, p. 15.

<sup>39</sup> Akerman, p. 257, no. 37.

<sup>40</sup> Akerman, p. 268, no. 27.

<sup>41</sup> Eckhel, p. 15.

<sup>42</sup> Akerman, p. 268, no. 32; Stevenson, p. 699, shows a cut.

<sup>43</sup> Akerman, p. 271, no. 16.

<sup>44</sup> Eckhel, p. 15, *fin.*

<sup>45</sup> Eckhel, p. 14; Akerman, p. 267, no. 23.

<sup>46</sup> Eckhel, p. 32; Akerman, p. 260, no. 1; Stevenson, p. 20, shows a cut.

mint, in which the *name itself* of Æsculapius appears" on the exergue. The scene is a most lively, realistic one,—the moment when the huge serpent makes its escape from the galley to the Island in the Tiber. The river-god is splendidly represented in the immediate foreground, reclining his left arm on an urn from which flows the stream to the left. He lifts his right arm in salutation or surprise toward the scene being enacted before him. A galley is just emerging from under the Sublician Bridge, two arches of which are shown. A diminutive figure on the galley, standing just beneath the arch of the bridge, lifts hands too in horror—for the great serpent, in immense coils, is leaping from the deck of the trireme to the Island. A tree and a building are shown on the Island, doubtless representing the Hospice-Temple afterwards erected there to the God of Healing.

A favorite hero with Antoninus, perhaps second only to Trojan Æneas, was Hercules. Medallions, especially, in his honor were issued with great frequency throughout the entire reign, and these lacked only a little of expressing *in toto* the life and labors of the giant. Many of them are without date, but the earliest that possesses a date is a medal<sup>47</sup> of the same type of obverse to which these last coins belong, *i.e.* Type 8. The reverse is without inscription. What need to label the familiar hero with the club and lion-skin? Any Roman lad, under any Orbilius, could conjure up his Æneid to word the picture here given. The country-side is represented as flocking to do homage to their saviour. They are bending to kiss his right hand, which the hero, while still resting it upon his club, graciously extends toward them. The Nemæan trophy hangs carelessly over his left arm. Behind him—he is evidently in a rugged wild-land, as is shown by the gnarled tree-limb and the rocks and cavern,—lies the hideous Cacus, whom he has just slain. The medallion is a fitting rebus to old King Evander's account of that mighty conflict on the slopes of Aventine.

And here, on another bronze medallion<sup>48</sup> of the same type of obverse, though without inscription upon the reverse, is the Graeco-Roman interpretation of Genesis,—the story of creation. Prometheus is seated on a rock, in the process of moulding the man. Pallas-Athene, close beside him, is leaning against a tree, around which her sacred serpent is entwined, and places upon the head of the new creation a butter-fly moth, indicative of the soul.

The 'Lays of Ancient Rome,' whether of Livy or Macaulay, would be deprived of a star-witness, were we to lose the famous medal<sup>49</sup> inscribed with the one eloquent word:

#### COICLES.

The scene lives before us—for there is the broken bridge above, with groups of armed men, the Romans on the one side, one with an ax, in the act of cutting away the structure, and the soldiers of Lars Porsenna on the other, while in the foreground Horatius Cocles battles with the waves.

<sup>47</sup> Eckhel, p. 29; Akerman, p. 264, no. 45; Stevenson, p. 455, shows a cut.

<sup>48</sup> Eckhel, p. 34; Akerman, p. 263, no. 38.

<sup>49</sup> Eckhel, p. 32; Akerman, p. 260, no. 3; Duruy's *History of Rome*, vol. 1, p. 176, shows a cut.

Coin no. 3 of our group, a cut of which is here inserted, will exemplify the money of Type 8. It is a *sestertius*, or 'large bronze,' having on its obverse a rather clear portrait of the Emperor in right profile, laureated. The crown of the head and the tip of the laurel wreath are allowed to divide the name PIVS into its syllables, a noticeable feature in coins of Antoninus where PIVS thus comes at the top of the circle. The space between the I and the V is here almost  $\frac{1}{2}$  in. in extent.

The device of the reverse, as confirmed by both the accompanying attributes and the surrounding inscription:

ANNONA.AVG (vsti),

is the personification of Annona, which, by the aid of much circumlocution, may be defined as the care exercised by the Emperor in regulating the corn-market of Rome and in fortifying the capital against scarcity or famine. The goddess,—and we can only appreciate the deification of such an abstraction when we recall the absolute dependence of the proletariat at Rome upon the liberality of the Princeps and the certain importation of grain from Sicily or Africa or Egypt, and, on the other hand, the panics that became history in the event of a failure in the regulation of the supply,—Annona is here represented in a standing posture, her left arm supporting a cornucopiae and her right holding two ears of corn over a measure, 'pressed down and running over,' for 3 ears are protruding and falling over the top. The folds of Annona's garments are partially lifted by the arms, spreading them as a gracious background behind her.

The present coin is a happy refutation of a sentence to be found on page 50 of Stevenson's *Dictionary*. . A commentary upon a coin of Ælius Caesar, Antoninus's predecessor as heir apparent—a coin with the same inscription, ANNONA.AVG., is followed by the remark:

It seems strange and unaccountable, that, whilst a coin with the above reverse should have been minted at Rome in honour of this indolent Prince, who did not live long enough to become Emperor, there appears to have been no similar legend struck on coins of such men as Antoninus Pius and M. Aurelius, of whom history attests their vigilant care for the public sustenance.<sup>50</sup>

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OBVERSE

REVERSE

<sup>50</sup> Doubtless such coins of Antoninus are not infrequent, though confirmation is missing in Akerman's Catalogue also. In the *St. John's College Quarterly*, already referred to in these papers, as high as three ANNONA coins of various types are listed in a group of 20 of this reign.



CUT ACROSS CROCKER MOUND OF THE HUNTER'S POINT PENINSULA, SAN FRANCISCO

## SHELLMOUNDS AT SAN FRANCISCO AND SAN MATEO

THE Anthropological Department of the University of California has continued during the winters of 1909-10 and 1910-11 the exploration of shellmounds on the shores of San Francisco bay which it began to examine systematically some years ago. As all carefully conducted excavations in the past had been made on the eastern shore of the bay, in the vicinity of Berkeley, Oakland, and Richmond, it was decided to give a wider outlook to the work by pursuing operations on the western shore, both north and south of the Golden Gate. In 1909-10, three mounds in Marin county, from 7 to 18 miles north of San Francisco, were opened. In 1910-11, two mounds on the same side of the bay, but on its southern arm, were explored. One of these was within the city limits of San Francisco, the other at San Mateo.

Both expeditions were in charge of N. C. Nelson of the staff of the Anthropological Department. The excavators consisted of university students, so that care in the work done and accuracy in the data determined were insured.

The artifacts obtained agree closely on the whole with those previously secured on the eastern shore of the bay. Several interesting differences were found, such as that net sinkers are relatively less abundant and projectile points more profuse in Marin county than in the vicinity of Berkeley.

Such distinctions may however well be due to the varying effect of local environment, which rendered it more profitable for the inhabitants of one locality to be hunters and in another spot to pursue fishing as their main occupation. At San Mateo a number of specimens of a distinct type of oval mortar were found, which has heretofore not been known from the bay region. As yet however nothing has been discovered which can be positively considered as evidence of a special type of culture in the several localities. This fact accords with the circumstance that while the upper strata of all mounds are the richest in remains, and particularly in those of a more finished or elaborate character, no essential change of culture has been encountered as excavation proceeded downward in any one of the mounds. In short, there seems to have been a gradual but slow and uniform development of civilization more or less common to the entire region, and merging into that of the Indians inhabiting Central California in the historic period.

This conclusion is corroborated by the anatomical remains. While it has not yet been possible to study those most recently collected, a preliminary examination indicates that they are of the same type as the skeletons previously discovered on the east side of the bay. This similarity further holds for all depths of the mounds, so that a single race of shellmound builders is almost certain.

As regards the age of the remains, careful examination reveals in almost every instance that the base of the shell deposit is at least a few feet below the present mean water level, and in some instances considerably more. Considered together with the size of many of the mounds, as well as other evidence, this fact appears to confirm the conjectures already made as to the age of the shellmound culture of San Francisco bay, and makes more probable the estimate of Mr. Nelson that the beginnings of at least some of these deposits must be placed in a period three thousand or more years ago.

The University plans to continue its explorations until the extreme southern, northern, and eastern arms of the bay, as well as part of the ocean shore in the same latitude, shall have been included. As more than four hundred existing or former mounds have been located on the bay shores alone, the field is a rich and promising one.

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## ARYAN ORIGIN OF THE AZTECS\*

THE question of the origin of the American Indians has baffled Ethnologists, Archæologists and Philologists for 400 years. Many attempts to penetrate this mystery have been made and all heretofore have failed. Humboldt tried to make something definite out of the Calendar of the Aztecs. He compared their signs of the Zodiac with those of various Asiatic peoples and found some significant things but nothing conclusive. Viscount Kingsborough spent much time and an enormous sum of money in attempting to show that the Aztecs were really the Lost Tribes of Israel. For this, he has been very unfairly ridiculed. His magnificent work *Mexican Antiquities* in 5 elephant folio volumes was a wonder in bookmaking with its copious texts and wealth of illustration in black and in colors. The proofs of my proposition involving 7 years study are too long and involved for me to give even a readable synopsis here. I shall ask the reader to take my word for it or refer him to my printed books.<sup>1</sup>

*Language* is, in my opinion, the only medium capable of proving accurately the genetic relationship of two peoples widely separated for a long period. I have relied chiefly on language, though mythology, religion and customs confirm my work. I am sure of my position. I am able to say beyond the possibility of mistake that Nauatl, the language of the Aztecs, is Aryan and very closely allied to Sanskrit. But the average reader may be inclined to say: I wish you could let me into at least a little of your method. I should like to know how you can be sure of something that goes back from 3000 to 5000 years and is based simply on words. I will give here a few elementary principles which anyone can understand. The Aryan languages: Sanskrit, Greek, Latin, Lithuanian, Armenian, Keltic, Slavonic, Germanic, including English, have a very definite system of phonetic changes by which a word may be traced through the group, that is, in as many languages as it occurs. No word perhaps occurs in *all* of them. If it occurs in two or three, it is considered established especially if one language is *Eastern* and the other *Western*. Take *cow* for example. The primitive language had *gau*; Sanskrit, *gó*; German, *kuh*; English, *cow*; but Greek *boú-s* and Irish *bó*; why was the Greek word *boú-s*? The Irish *bó*? Because after *k* and *g* a parasitic *u* or *w* sometimes intrudes. Thus *kow*, *kwou*, and from this semi-labial *w* to *b* is an easy transition, *k* or *g* disappearing in the process of labialization. To illustrate this change in imitating a dog, we say: "bow-wow" where logically we should say "bow-bow."

The old root *ruc* means light; Greek, *leukós*; Latin, *lux*; German, *licht*; English, light. The liquids *r* and *l* are interchangeable. From this same root we get in Sanskrit *roca-ná*, upper region of light (heaven). The Mexican (Aztec) word for this is *i-lhuica-tl*, heaven (pronounced *looic*).

\*Mexican in Aryan Phonology, (1907); Primitive Aryans of America, (1908); Mexican Aryan Comparative Vocabulary, (1909); Morphology of the Mexican Verb, (1910); Mexican Sibilants and Neun Endings, (1911).

\*We regret to announce the death of the author, Mr. Denison. on April 7, 1911.

In this sort of work *meanings* are very important. They must be *close*. The root *tul* (or *tol*) meant to *balance*, as a weight, and to *bear* in the sense of suffer, endure. In Sanskrit, *toláyati* means he balances or weighs, in Latin, *tuli*, I bore; in Greek, *tál-os*, means wretched, in Scotch the meaning to suffer coincides with the Greek and Mexican, as in Burns:

“To thole the winter’s driving blast.”

The Mexicans called a certain Spanish Friar “*Tolinia*” because he *endured* much in his labors for the poor. It may be asked here, what does *-inia*, the affix of the word mean? Those who seek further on this point, may consult my *Morphology of the Mexican Verb*.

Sometimes no change at all occurs in a word through a very long period of time, even 3000 years or more. The affirmative, *yea*, yes, occurs in Mexican *ye* which is pronounced exactly as in English, also *ye*. *Uel*, good, in Mexican coincides in form and in sound with *well* in English. *Cem* one, in Mexican is precisely the same as *sem* found in the Latin *sem-el*, once.

These few bits of comparative Philology illustrate my work and the *way*, but I must add that the *easy* things are very few and the *hard* ones very many. During my 7 years, continuous work thousands of slips with tentative derivatives were cast aside. In some stubborn instances, these Aztec words seem to defy analysis or certain comparison. These words *Aztec* and *Az-tlan* themselves enfold an important secret. What is *azt*? It might be *copper* or *gods* or neither of them. But there is no doubt that this root is highly significant in the history of this people whose home was Aztlan and from its description an Eden. It may be as-gard the Germanic home of the gods.

And what is the wonderful story of the Aztecs? They are perhaps the greatest historical puzzle ever set before the historian for solution. Many books have been written about them—some magnifying their importance, others depreciating it. They, with their kindred tribes, called in the aggregate, Nahua, were beyond doubt an important people, important in numbers, in power, in civilization. They had 27 rulers between 1087 A. D. and 1565. To say less than this is to do them less than justice. Their civilization began in Asia, not in America. The Ethnologists and Philologists have as a rule dogmatically asserted the contrary but the facts are against them and I may say further without fear of successful contradiction that many words in Algonquin are Greek in form and meaning. It is time for learned men to drop these old theories and investigate the new. This can best be done by a profound and general study of American languages.

But where did these wonderful people the Nahua, come from? They came from Western Asia, from East Iran, the present Afghanistan, Bokhara and Turkestan, from the Pamirs “The Roof of the World.” Their own historians give some accounts of the *Migrations* which from first to last occupied several centuries. They began with the Chichimecs, apparently about the time of Christ, and the last, the Aztecs arrived at the site of the city of Mexico about 1325 A. D. It is evident from the successive migrations, which all ended in a comparatively small country, *Anahuac* “Water Country,” around the Mexican Lakes, that these people knew the way and that

the way was open for centuries. It is said that the Toltecs who arrived at Tula, state of Mexico, 690 A. D. (Clavijero) were about one hundred years on the way. They stopped en route to raise crops and recuperate from time to time. On the other hand the Aztecs accomplished the journey in about *twenty-three years*. (See *Primitive Aryans of America*. Chap. XV.) All came from the *North* which indicates a North Pacific route "by boats over the sea wide as heaven."

All this suggests a more careful investigation into the possibilities of inter-communication between the Old World and the New at a period long antedating Columbus or the Northmen. The statements of the Indian Historians are too specific to be brushed aside as fabrications. Besides they allude frequently to ancient books (in picture writing) which they knew how to read. These picture writings were based in part at least on a syllabic system in which the first syllable of a word had a phonetic value. Tenochtli, the name of a chief, would be spelled te-tl, "stone" noch-tli, cactus, *i.e.*, the pictures of a rock and a cactus. This method is similar to old Greek syllabic writing.

That the Aztecs were once in touch with Zoroastrian fire worshippers is beyond doubt. They considered fire as sacred and kept fires burning day and night in their *teocalli* temples. They extinguished and relit all fires once in 50 years. This ceremony was most impressive and tragic for the new fire was relit on the naked breast of a living victim. Swift runners carried the new fire to all parts of the country and universal joy succeeded universal lamentation. Mexican mythology is very archaic and their gods may be traced in functions and in *names* to the Pantheon of the Old Aryans. For example, *Uitzilo-poch-lli*, the Mexican war god, is in its root *poch* the old Persian, Baga; Russian, Bog, God. This root bog, poch, bag, means simply the "Giver." The serpent worship of the Aztecs is a survival of the once universal serpent worship of mankind. Quetzalcouatl, their "Christus," "The Fair God," was in name simply the plumed serpent.

Chicago, Ill.

THOMAS S. DENISON.



EXCAVATION OF A MILE-CASTLE IN CUMBERLAND.— Some time ago a mile-castle was discovered by Messrs. Gibson and Simpson on the Cumberland side of Poltross Burn. The whole interior has been laid bare, revealing features of special importance. It lies on a slope facing north, with the Roman wall at its foot. "It enclosed a series of terraced buildings intersected by a central street. These give us, for the first time, an example where the internal arrangements of a mile-castle have remained; and by excavation, conducted with scientific care, successive periods of occupation, destruction and reconstruction are made manifest." The work done from year to year in this section of England is greatly advancing our knowledge of the Roman wall.

## BOOK REVIEWS

### THE ICE AGE IN NORTH AMERICA<sup>1</sup>

THE special studies of Professor Wright on the glacial drift began in 1874, his earliest work, published two years later, being a description and explanation of the origin of remarkable gravel ridges, called kames or eskers, in northeastern Massachusetts. During the next 4 years, with the late Professor H. Carvill Lewis, he traced the boundary of the glaciated area and its terminal moraine across Pennsylvania, and their report and maps form Volume Z of the Second Geological Survey of that State. Later Professor Wright spent several summers in continuing this survey of the glacial boundary through southern Ohio, Indiana and Illinois. This work was initiated under the auspices of the Western Reserve Historical Society, of Cleveland, Ohio, and was extended westward to the Mississippi river for the United States Geological Survey. In subsequent years he examined the glacial formations in portions of the Northwest to Washington and in Alaska, including a very interesting investigation of the Muir Glacier.

These observations, and those of many other glaciologists of the United States and Canada, were very fully presented and discussed in the first edition of this work, published in 1889, which was followed by 3 other editions, enlarged by supplementary notes.

Additions and changes contained in this Fifth Edition are mentioned by its preface as follows:

In the present revision the new material added is especially abundant only upon a few subjects. Many existing glaciers have been discovered in the Rocky Mountain system in the United States and Canada—a region which was scarcely touched by explorers until the close of the last century. Explorations have also greatly extended our knowledge of Alaskan glaciers, while the changes in the Muir Glacier have been so enormous as to be really startling, fully sustaining the theoretical conclusions which I had drawn from my studies of the glacier in 1886. Much new material, also, has accumulated concerning the glaciers of Greenland, Central Asia, and the Antarctic Continent.

As to the extent of the continental glaciers of the Pleistocene period, there has been little additional information since the publication of the first edition. Among the most important additions has been the rectification of the glacial boundary across New Jersey and Pennsylvania, where the "fringe" or "attenuated border," imperfectly apprehended by Lewis and Wright, has been carefully traced by Professor E. H. Williams from the Atlantic Ocean to Ohio and found to be from 20 to 30 miles south of the terminal moraine.

The facts relating to this border, brought out by Professor Williams, have a most important bearing upon the discussion both of the cause and of the date of the Pleistocene glacial epoch.

<sup>1</sup>*The Ice Age in North America and its Bearings upon the Antiquity of Man.* By G. Frederick Wright, D.D., LL.D., F.G.S.A. Fifth Edition, with many new maps and illustrations, enlarged and rewritten to incorporate the facts that bring it up to date, with chapters on Lake Agassiz and the probable cause of glaciation, by Warren Upham, Sc.D., F.G.S.A., 8vo, pp. xxi, 763. Three folded maps, 9 page plates, and 196 figures in the text. \$5.00 net, carriage 25 cents. Oberlin, Ohio. Bibliotheca Sacra Co. 1911.

There has also been a great accumulation of evidence, collected pretty largely by Mr. Frank Leverett and the geologists of Iowa, Minnesota, Dakota, and Canada, concerning the episodes of the Pleistocene glacial epoch, leading to the division into the Kansan, Illinoian, Iowan, and Wisconsin periods of advance and retreat. The relative length of time occupied by these episodes is still a most interesting subject of investigation.

The question of the date of the Pleistocene glacial epoch is still a subject of hot discussion, but a great accumulation of facts, relating to post-glacial erosion and sedimentation, is rapidly establishing a very moderate glacial chronology.

Likewise a great accumulation of facts is limiting the theories concerning the cause of glaciation to changes in land elevation and in the direction of oceanic currents. The chapters upon the date and the cause of the epoch have been greatly enlarged and rewritten.

The final chapters upon the discovery of human relics in deposits connected with the Glacial epoch in North America have also been thoroughly revised and enlarged, to take into consideration the more recent discoveries of facts bearing both for and against man's existence here in glacial times.

Glaciers now existing are the theme of the first 5 chapters, including the glaciers of the Rocky Mountains, the Sierra Nevada and Pacific Coast ranges, and of Alaska, Greenland, and other parts of the world.

The great glaciated area of this continent, comprising about 4,000,000 square miles, and its diverse glacial, fluvial and lacustrine deposits, are described in the next 11 chapters. The last two of these chapters relate the history of the deposition of the loess in the basins of the Mississippi and Missouri rivers, and the formation of ice-dammed lakes during the maximum extension of the continental ice-sheet in the valley of the Ohio river, and during its recession and departure in the basins of the Great Lakes tributary to the St. Lawrence and in the valley of the Red river of the North.

Lake Agassiz, the largest of these temporary glacial lakes, extended as its ice barrier receded along the Red river valley and over the sites of Lakes Winnipeg and Manitoba, attaining a length of 700 miles or more and an area exceeding 100,000 square miles.

Chapter XVII treats of the migrations of plants and animals occasioned by the extension of the ice-sheets, and of the subsequent return of the temperate flora and fauna, when the ice-sheets were melted away, to occupy again the vast areas from which they had been excluded.

Europe during the Glacial period is the subject of the next chapter, including summaries for Great Britain by Lewis, Kendall and Harmer, and for the moraines in Germany by Salisbury.

In the next two chapters, respectively on the cause and the date of the Glacial period, Professor Wright shows that the astronomic theory of Croll, which attained much favor among glacialists, cannot be a true explanation of the causes of the Ice Age. The astronomic conditions which were supposed to produce glaciation terminated about 80,000 years ago; but the Ice Age, as shown by Winchell, Gilbert, Wright and others, in computations from the rates of erosion of the gorges below the St. Anthony falls and Niagara falls, and from other concurrent lines of evidence, continued until about 10,000 to 6,000 years ago.

It is also well shown that the departure of the North American ice-sheet and the decline and end of the Glacial period were comprised within only a few thousand years. The aggregate shore erosion and beach deposits of the glacial Lake Agassiz, which was contemporaneous with the greater part of the recession of the ice-sheet, have probably no more than a tenth of the amount of similar erosion of shores and accumulations of beaches and dunes by the waves and currents of Lake Michigan during the post-glacial period.

The relation of the Ice Age with the antiquity of man is the subject of the last 4 chapters of this volume. In this part, Professor Wright discusses very convincingly the evidences that men were living on this continent, as they are fully proved to have inhabited Europe, before the ice-sheets disappeared. In glacial gravel and sand deposits of the Delaware and Ohio valleys, in the Missouri valley loess of Lansing, Kansas, in the modified drift of Little Falls on the upper Mississippi river in central Minnesota, and in Quaternary beds of California and Idaho, doubtless as old as the glacial drift, stone implements and other relics and the bones of man have been found, amply proving his presence during the closing stages of the Glacial period.

For the general reader Professor Wright has very interestingly set forth the records of this latest geologic period, with helpful discussions of the methods by which the ice-sheets produced the various drift formations, and of the causes and duration of the Ice Age. For the special student, who will desire to consult other authors, he has added a bibliography, filling 30 pages, of papers on American glacial geology published since the first edition of this work. The index fills 21 pages.

WARREN UPHAM.



### THE REVOLUTIONS OF CIVILIZATION<sup>2</sup>

**D**OCTOR William Flinders Petrie has added to his numerous scientific contributions a short book on *The Revolutions of Civilization*. It is characteristic of Doctor Petrie—short and to the point. It is exceedingly suggestive and the theory advanced convincingly set forth in the 131 pages comprising the book.

With the rise and fall of the various civilizations of Egypt as a basis, for there we have a vista of 10,000 years, Doctor Petrie shows that civilization throughout the world is "a recurrent phenomenon" and in Egypt and Europe the fluctuations are approximately contemporaneous. The author considers sculpture as the most definite test of the rise and decline of civilization, especially when taken in connection with architecture and painting.

He divides the history of man into 8 periods or "Great Years." The first two periods belong to the prehistoric. In these the decorations of

<sup>2</sup> *The Revolutions of Civilization*. By W. M. Flinders Petrie, D.C.L., LL.D., F.B.A., F.R.S. Pp. xii, 136; 57 illustrations. 2s. 6d. London and New York: Harper and Brothers. 1911.

the pottery and the flint work as found in Egypt show two periods of advance and decline—the length of these periods, however, is indeterminable. The III period produced the distinctive art of Egypt which appeared in archaic sculpture “shortly before the I dynasty,” rose to its best development and freedom of treatment in the I dynasty and declined to conventionalized forms in the II dynasty. This order prevailed throughout the 8 periods—all of which are traced by Doctor Petrie and compared with the fluctuations of civilization in Europe and other parts of the world.

In the fluctuations of civilization the order in which different activities develop is well shown in the VII period in which Doctor Petrie gives the following dates as the turning points:

B.C. 450 in Sculpture	B.C. 0 in Mechanics
B.C. 350 in Painting	A.D. 150 in Science
B.C. 200 in Literature	A.D. 200 in Wealth

Doctor Petrie shows that the “impression that civilization always comes from the East is due to the East being a few centuries ahead of the West in its phase and this difference in phase of the wave of civilization is the cause of the constant struggle between the East and the West.”

What is the cause of these periods?—or as the author puts it “What determines the spring, summer and autumn of the Great Year?” Doctor Petrie thinks that the theory of Mr. Huntington that such changes in civilization are due to the pericdical changes of climate will not answer this question. Such climatic changes have a modifying effect on the length of the periods, but “will not account for the regular phases already described,” nor for “a race keeping to its own phase, when it has passed into a country of a different phase, as we have noticed.”

There may be a normal rate of change from stage to stage, produced by the process of the human mind. Each generation may average a certain extent of change, as each year averages a certain amount of growth or decay in the body. Yet against this as an entire cause there is the alternation in the closeness of the phases; the different activities were grouped much more closely together in early times, they are by now separated by some generations each. This may imply that each subject is more elaborately developed as it comes forward, and absorbs all the best intellect for a longer time, and so postpones the rise of the next subject.

There is, however, another possible cause of the length of period. The rise of the new civilization is conditioned by an immigration of a different people. That is to say, it arises from a mixture of two different stocks. That effect of mixture cannot take place all at once. There are barriers of antipathy, barriers of creed, barriers of social standing, but every barrier to a race-fusion gives way in time, when two races are in contact. Even if every marriage in the first generation was a mixed one, that would only give two elements of the needful fusion to each child; and what seems to be needed is an ancestry of all the elements of two different races completely intermingled to produce a new era of activities. Now, if generations average 30 years, we may take it that each man has 10 ancestors a century ago, apart from related marriages. Hence each man has a million ancestors in 6 centuries, 10 millions in 7 centuries, 100 millions in 8 centuries. Thus (apart from related marriages) 7 or 8 centuries of mixture of two races ensures that, in any ordinary-sized country, the full maximum number of different ancestors are blended, and every strain of one race has crossed with every strain of the other. This is the period of greatest ability, beginning about 8 centuries after the mixture, and lasting for 4 or 5 centuries in different subjects. The extension of the time may well balance the delay in mixture due to related marriages. Thus we may

say that the complete crossing of two races produces the maximum of ability, and that, from that point, repeated generations diminish in ability. This may well be the basal cause of the length of period which we have noticed, as it well accords with it in the time required. But probably each of the other causes before noted may bear a part. For instance, a dry period and famine may precipitate a migration which cuts short a civilization, as in period VI.

In conclusion regarding the future he says that since "the source of every civilization has lain in race mixture, it may be that eugenics will, in some future civilization, carefully segregate fine races, and prohibit continual mixture, until they have a distinct type, which will start a new civilization when transplanted. The future progress of man may depend as much on isolation to establish a type, as on fusion of types when established."

FREDERICK B. WRIGHT.



### DIE PALÄSTINA-LITERATUR<sup>3</sup>

**W**E are pleased to welcome this second volume of Doctor Thomsen's valuable work, covering Palestine literature which appeared during the years 1905-1909. The plan of the series as expressed in the sub-title is comprehensive—an international bibliography in systematic order with author and subject index. This plan is well carried out. Over 3750 separate books and articles in various languages are included. Even reviews of books on Palestine find a place in connection with the books reviewed. The contributions to Palestine literature are arranged under 6 general heads, viz.: general, including bibliography, biography, etc.; history, arranged under different periods; historical geography and topography; archaeology geography and present-day Palestine. The index, covering 38 pages, enables one to turn immediately to the pages on which any given author or subject is mentioned.

Each notice includes what we should expect—author, title, when and where published, number of pages, illustrated or not, and sometimes the trend of the work in question is given in a few words; as for instance, to the notice of an article by R. A. S. Macalister on "*The Garden Tomb*" are added the words *Kann nicht Jesu Grab sein.*

Doctor Thomsen expects to issue a third volume in 1915, covering the years 1910-1914.

<sup>3</sup> *Die Palästina-literatur, eine internationale Bibliographie in systematischer Ordnung mit Autoren- und Sachregister.* Bearbeitet und herausgegeben von Peter Thomsen. Zweiter Band, die Literatur der Jahre 1905-1909. Pp. xx, 316. 80 Pf. Leipzig, J. C. Hinrichs'sche Buchhandlung, 1911.



## EDITORIAL NOTES

**ORIGIN OF THE GREAT GREEK GAMES.**—Professor Ridgeway considers that the origin of the Great Games of Greece lay in the worship of dead heroes. Homer mentions funeral games for Patroclus and Oedipus and shows that the ordinary occasion of such contests was a funeral.

**ROMAN COINS FOUND IN FRANCE.**—In December, 1910, a find of more than 600 Roman coins was reported from near Perpignan, France. The earthenware pot in which the coins were was broken by the pick which disclosed its presence. The coins date from 100 B.C. to 25 B.C.

**SOCIETY FOR THE PROMOTION OF ROMAN STUDIES.**—A Society for the Promotion of Roman Studies has been formed in London. Together with the Hellenic Society it maintains a library of Greek and Roman archæology and history.

**MAGAZINE OF ANTIQUE FIREARMS.**—There has recently come to our notice volume 1, number 1 of the *Magazine of Antique Firearms*, a monthly periodical devoted to the history of firearms. It is edited by G. Elsworth Brown, and published by Jno. N. Clements, Athens, Tennessee.

**RECENT FINDS AT MERÖE.**—Reports from Khartum under date of December 21, 1910, state that M. J. Garstang has recommenced work at Meröe, on the Nile. He has found a palace, a bath-room, the walls of an acropolis, quays and a harbor. A large bronze head with inlaid eyes—an excellent example of Greek art—was also discovered.

**BEARDED HEAD OF DIONYSUS FROM NEAR THE PEIRENE.**—At the March meeting of the American School at Athens, Mr. Hill gave an account of the School's excavations near the Peirene. A number of marble heads were found in a cistern of the Byzantine period. Among them was a heroic-sized bearded head of Dionysus.

**DOCTOR MACCURDY APPOINTED ASSISTANT PROFESSOR OF ARCHÆOLOGY.** By vote of the Corporation of Yale University, Doctor George Grant MacCurdy has been appointed Assistant Professor of Archaeology. Professor MacCurdy is secretary of the American Anthropological Association, and a consulting editor of this Journal.

**OLD VESSEL FOUND IN CANAL ZONE.**—“The hull of a vessel probably several centuries old has been dug out of the sand at Nombre de Dios, in the Canal Zone. It was under 20 ft. of sand and about 300 ft. from the beach. The wood resembles oak and was put together with wooden pins. Many old slugs and bullets presumably from the ship's magazine were found.” (*Peru To-day*, February, 1911.)

PETRIFIED WOMAN FOUND AT POMPEII.—Dispatches from Rome say that the petrified body of a woman has been recently found at Pompeii. Many valuable jewels adorned the body, leading to the inference that she belonged to the patrician class. The most remarkable of the jewels are two clasps, each composed of 21 pearls in a cluster. Nothing comparable with them has been found before among the ruins of Pompeii.

COFFIN FROM BENI-HANAN.—The *Bulletin* of the Royal Museums at Brussels for August, 1910, announced the addition to their Egyptian collection of a coffin found by Professor Garstang at Beni-Hanan. The coffin is decorated inside and out with paintings, mostly well preserved. The inside of the cover bears a copy of a religious text, the 17th chapter of the Book of the Dead. The interior friezes reproduce the objects which formed part of the funeral furniture.

PALESTINE EXPLORATION FUND.—Prior to taking up his work at Beth Shemish for the Palestine Exploration Fund, Doctor Duncan Mackenzie made a trip to Petra. An architect, Mr. Newton, accompanied him and was able to make a thorough architectural drawing of both stories of the Treasury of Pharaoh, work which had not been done previously owing to the difficulty of scaling the monument. By the use of a ladder specially constructed, Mr. Newton was able to ascend and make an accurate survey of the whole.

ORIGIN OF CREMATION AMONG THE GREEKS.—J. de Mot believes that cremation among the Greeks originated in an attempt to prevent the spirit of the dead man from returning to trouble his relatives. He thinks that probably the Egyptians had the same thing in mind in making the burial chambers of the pyramids difficult of access; and the Babylonians in using jars of two pieces fastened together after the body had been placed inside. Water was also considered a barrier against return, but fire was the best of all.

THE SOUTHWEST MUSEUM.—The main activities of the Southwest Society, affiliated with the Archaeological Institute of America, centers around its museum, the Southwest Museum in Los Angeles. During the last year a bequest of \$50,000 to be used on the building was announced. Doctor J. A. Munk has donated his valuable library of Arizoniana and Doctor Charles F. Lummis has presented valuable books, manuscripts and rare collections together with a house in which his collections will be kept intact.

A FIND OF EGYPTIAN STELÆ.—Captain Weill and M. A. J. Reinach in their work at Coptos last season discovered 7 stelæ piled one upon another in what appears to have been a foundation deposit. One of these belongs to Pepi I; 3 to Pepi II; one to Nefer-kau-Hor, whose Horus or hawk name was Neter-bau; two to Uatch-Ka Ra, whose Horus name was Demd-ab-taui. These last two kings Reinach and Weill would assign to

the VIII dynasty closely following the Pepis of the VI dynasty, thus dropping out Manethro's VII dynasty.

**EXCAVATIONS ON CRETE.**—Mr. Hatzidakis, the Ephor of Cretan Antiquities, has made some interesting excavations at Tylisos, 6 miles west of Candia and Cnossus, uncovering the relics of a palace ruined by fire and pillage. Nevertheless, it contains monuments which he considers to be superior in wealth and artistic skill to those found on other sites in Crete. Among these were copper cauldrons, larger than others yet found at this date; a statue about 12 in. high; fragments of wall paintings of a style superior to those of Cnossus; and two tablets in the Cretan alphabetical script.

**EXCAVATIONS OF A HUT-CIRCLE NEAR ACKERGILL TOWER, SCOTLAND.**—Mr. J. E. Cree has given an account to the Society of Antiquaries of Scotland of the excavation of a hut-circle near Ackergill Tower, Caithness. The site was within the fringe of sandy dunes near the shore. When the structure was laid bare, it was seen to consist of the remains of an irregularly circular wall, varying from 2 to 4 ft. thick, enclosing an area of about 12 x 10 ft., having an entrance facing south. The interior was roughly paved with irregular flags. Inside to the left of the entrance was a small recess set off by a stone standing on edge. Outside was a small enclosure with no visible entrance. Another enclosure outside seems to have been used as a cooking place. Aside from a flint core and two implements of iron like punchers, no relics were found.

**EXCAVATIONS ON THE ISLAND OF JERSEY.**—On February 23, 1911, Mr. R. R. Masett read a paper before the Society of Antiquaries on recent archaeological researches on the island of Jersey. In July 1910 the excavation of the cave of St. Brelade was undertaken. Bones and teeth of rhinoceros, reindeer, a small species of horse and of deer were found, leading to the conclusion that the fauna was pleistocene and that, when these animals lived, Jersey was connected with the continent. Nine human teeth from a lower jaw were found lying in their original position, but the bone had been completely absorbed by the surrounding soil. A number of flint implements found are interesting as no flint is now found *in situ* on the island. The cave of St. Ouen was explored in 1881, but there seems to be a field for investigation there still. A large number of implements, possibly Mousterian, have been found.

**CLAY VESSELS FOUND ON CULBIN SANDS, SCOTLAND.**—At the January meeting of the Society of Antiquaries of Scotland, Mr. J. Graham Callander reported the discovery of two clay vessels on Culbin sands, Morayshire. One contained wheat. The other was found in a kitchen midden. The vessel containing wheat was in fragments, but appears to have been about 12 in. in diameter. Fragments of wood charcoal, hammer stones or grain pounders and a calcined scraper of flint were also found, suggesting that the site might have been covered by a wattle hut.

Although wheat has often been found on Roman sites in Scotland, Bronze Age wheat was previously known only by 3 grains in the clay of an urn from Yorkshire, and by grains similarly embedded in a Bronze Age vessel found at North Berwick. The other vessel from a kitchen midden, near by, is cylindrical, resembling none of the regular types of Scottish Bronze Age pottery, though some other similar pieces have been found.

**EXPLORATION OF CAVES AT GIBRALTAR.**—In September, 1910, Doctor Duckworth conducted excavations at Gibraltar for the purpose of gaining information as to the conditions in which prehistoric remains occur on the Rock of Gibraltar. A general survey of the locality was made and two caves were explored. The first was a cave in Forbes Quarry, whence the human cranium known as the Gibraltar skull was taken in 1848. The floor was covered by successive layers of stalagmite formation. No traces of animal remains were found. The other cave was 800 ft. above sea-level. There were abundant evidences that it had been a resort of prehistoric man in the early neolithic stage of culture. This appears to have been a cave kitchen-midden. The evidence of human occupation includes part of a human skeleton of the Cro-Magnon type, stone implements, sherds and shell ornaments. Remains of the ordinary animals were found and, in addition, bones of wolf, seal, possibly chamois, certain birds and reptiles. No arctic rodent types were identified. Doctor Duckworth hopes to obtain permission to carry on further investigations.

**EXCAVATIONS ON THE ISLAND OF CEPHALONIA.**—M. Cavvadias has recently conducted excavations on the island of Cephalonia, one of the Ionian islands belonging to Greece. He believes that he found evidence of 3 successive layers of civilization, beginning with a Neolithic one which he places about 3000 B.C. and which is distinguished by rude monochrome pottery. The people at that time lived in wooden huts and buried their dead either in the hut itself or immediately outside, the tomb being a pit of roughly circular or elliptical shape. Then followed a period of "pre-Mycenæan" culture about 1000 years later, characterized by black undecorated pottery and burials in oblong tombs formed of 4 slabs of stone. Last came the Myceæan period which he places between the XV and X centuries B.C. At Mazaracata, M. Cavvadias found tombs showing evidence of a high state of civilization and containing gold and bronze ornaments, pins and daggers, enamels and engraved stones, but no iron. Here the dead were placed in their tombs sitting, or rather squatting on their heels, as the Egyptians still do, which confirms the remarks of Herodotus as to the burial customs of the Nasamones in Libya.

**EXCAVATIONS AT CAERWENT IN 1910.**—At the meeting of the Society of Antiquaries (London) on February 16 a report was made of the work done at Caerwent during 1910. The field and garden west of the adjoining church yard was excavated. A series of shops and work shops was found. The shops occupied the front rooms of the houses, and were small, only 8 or 9 ft. square. They usually opened in front, but occasion-

ally on the side. Behind the shops were larger rooms, fitted with furnaces. In one of the rooms so furnished, 2 small bars of lead  $6\frac{1}{2}$  in. long, 1 in. wide and  $\frac{1}{2}$  in. thick and a piece of ornamental lead were found, indicating that the working of that metal might have been carried on there.

One cellar unlike anything previously found at Caerwent was encountered. It measured 12 ft. 9 in. by 8 ft. 9 in. and was reached by 5 steps having a descent of 4 ft. 2 in. The floor was of lime cement. There was a small window in the south wall blocked up in later Roman times. In another house was a small sandstone altar *in situ* with a Latin inscription.

**LIBRARY OF GERMAN LINGUIST TO GO TO SANTA FÉ.**—It is announced by Dr. Edgar L. Hewett, director of American Archaeology for the Archæological Institute of America, that the library of the late German linguist, Professor Franz Nikolaus Finck, is to be brought to this country. It has been purchased by the Hon. Frank Springer of New Mexico, for the use of the School of American Archaeology, the research school of the Archæological Institute of America.

Never before was such a collection of works on language and the science of language brought to America. Professor Finck held the chair of General Linguistics at the University of Berlin, and was the foremost linguistic scholar of his time. His writings are widely known. Dr. Finck did a great amount of field work in the Caucasus mountains of southern Russia, where in an area no greater than that of Switzerland, over fifty distinct languages are spoken. There is scarcely a language in the world with which he was not familiar.

After his death, which occurred recently, Mr. Springer opened negotiations for the purchase of the magnificent private library which had been amassed by Dr. Finck during his lifetime. The books are written in some fifty different languages. The library is to be installed in the historic palace at Santa Fé, where the Museum of New Mexico and the School of American Archaeology are now housed.

**VASE CONTAINING ROMAN COINS AND RING.**—About a year ago a vase containing 6 silver coins and a silver ring was found near S. Ferriby, England. There had been a slight change in the course of the Humber river, which brought the vessel to light. The vase is well made and solid. It is of typical Roman grey ware, similar to others found near by. It is globular in shape,  $3\frac{1}{2}$  in. high,  $4\frac{1}{2}$  in. wide,  $3\frac{3}{4}$  in. at the mouth and  $2\frac{1}{4}$  in. at the base. There is an overhanging lip. The only ornamentation consists of two lines  $\frac{1}{4}$  in. apart about the middle of the vessel. The vase is wheel-turned and well baked. Taken by itself it would probably have been estimated as belonging to the II century A.D.

The coins are exceptionally well preserved. One, a coin of the Emperor Valens, is larger than the others, being nearly one inch in diameter. They all appear to be of the IV century, and are valuable as showing the variety of pieces in circulation at one time. The emperors Valens, Valentinianus, Julianus II, Constantius II and Gratianus are represented. The ring averages  $\frac{3}{4}$  in. across and the bezel consists of a solid rectangular piece of

silver  $\frac{3}{10}$  in. by  $\frac{1}{4}$  in. The flat surface of this has been crudely engraved with a design which seems to be a bird hovering over an object which is not very definite in character. Mr. Reginald A. Smith, of the British Museum, is of the opinion that the device represents the dove and the sprig of olive, and would therefore appear to be of Christian origin, of about the V century. This date agrees well with the coins.

**EXCAVATIONS AT VAUX-ET-BORSET.**—The principal excavations carried on by the Royal Museums of Brussels during the latter half of 1909 were in the province of Liege at Vaux-et-Borset. A new group of neolithic hut foundations was excavated and named Cité Charlier. These habitations, partly subterranean, were inhabited by men who used almost exclusively the flint of the region. These beds are characterized by the great abundance of fragments, flakes and nuclei, the abundance of either rough or polished flint axes, the lack of arrow points with peduncles and barbs or in the form of a leaf, the presence of red ochre and the quantity of pottery. The pottery is the most interesting of the finds. There was an abundance of it in each foundation, some coarse and reddish, some of a much finer nature. The shapes are elegant and there is a remarkable variety and richness of the incised ornamentation consisting of straight and curved lines, made with the finger, chisel or point before or after baking.

These are in some respects similar to the dwellings of Reggionais in Italy, but in others different. Montelius ascribes them to the late neolithic period. These hut foundations would be, according to that eminent scholar, contemporaneous with the end of the third Scandinavian age and the second village of Hissarlik (2500 to 2000 B.C.). According to De Puydt the date is doubtful.

Seven pits or hearths of various shapes have been studied at Vaux-et-Borset, varying from 7 ft. 10 in. long by 3 ft. 6 in. wide to 11 ft. 5 in. by 4 ft. They varied in thickness from 5.8 in. to 2 ft. and lay at depths varying from 1 ft. 4 in. to 2 ft. 11 in.

**INDIAN TRADITIONS AS TO THE ORIGIN OF MOUNDS.**—The Indians as a rule have no traditions as to the origin of mounds, but during the summer of 1910 Mr. Arlow B. Stout found an exception among the Winnebago Indians encamped on the lower Dells of the Wisconsin river. One of these, Fred Dick, replied to questions somewhat as follows:

"Yes, Indians used to build mounds. Our Winnebago people did. They built many round mounds for burial. Don't build mounds any more. Don't do many things we used to do. White man coming changed many things of old time."

He was unable to enlighten Mr. Stout as to the animal represented in an effigy mound near by, but offered to ask some of the older Indians. He later brought the following report:—

"This is an animal that lives on the water. It comes out at night and goes along the bank. No, I never saw the animal. Only the oldest people ever saw it. No, it has no name. Indians use to have name for it but white man has no name for it. Guess old people only thought they saw the animal. It must be what you would call a spirit animal. Don't know

of any Indians that now have that animal [as a totem]. I am a bear. That other fellow is a panther. Yes, Indians built these animal mounds too."

Mr. Stout considers this evidence in support of the view that the Winnebago built both conical and effigy mounds, the latter in connection with the totem system. He says: "This bit of evidence regarding the use of a 'spirit animal' as a totem is interesting in view of the large number of effigy and so-called linear mounds that do not represent any known animals."

**FRAUDULENT ARCHÆOLOGICAL RELICS.**—The International Society of Archæologists has a special fraud department for the purpose of exposing frauds and makers of fake relics. In the December 1910 issue of their *Bulletin* the Fraud Director, G. Elsworth Brown, makes a report, the facts of which should be more generally known. He says in part:

"A glance at the operations of the archæological faker is positively alarming. A certain man in North Carolina is turning out about \$25.00 worth of so-called Indian relics every day, so ingeniously manufactured and 'aged' that at least 50 per cent of them baffle the best expert detectors. He sells his product to a dealer who ships part of them to Europe where at least 99 per cent are accepted as 'genuine pre-Columbian stone implements' by custodians and museum officials that are recognized as the highest authorities. This particular person devotes his entire time to this nefarious trade, and is, in my opinion, the most baffling faker in the east."

"There is a firm—an aggregation of men, not a single dealer—located in Virginia whose output of bogus specimens extends not only over the United States, but also in Europe. This establishment was once supplied by agents in 36 states, but their 'quality of goods' has been quietly exposed to the leading archæologists in this country until their business is now principally with amateurs and in foreign countries. A peculiarity of this establishment's stock of stone implements is that most of them are poor (yet genuine) specimens rehashed, retouched and resharpened. This, of course, is as objectionable as though they were newly made throughout, but the fake manufacturers find it more profitable to buy up poor specimens and make fine ones of them, than to make them from the beginning. One of their practices is making double-barbed arrow heads from common ones by chipping out notches in their edges. By this way a common 5-cent arrow is converted into a 50-cent 'fine double-barbed' one. . . . .

"Bogus specimens are in themselves bad enough, but when they are accompanied by bogus accounts of their alleged discovery the evil is twice wrought. This counterfeit data most always accompanies the bogus relic, and very often the genuine pre-historic relic's commercial value is dishonestly raised by false accounts of its discovery."

**NEW LAWS GOVERNING ARCHÆOLOGICAL MATTERS IN WISCONSIN.**—Charles E. Brown of the Wisconsin Archeological Society has sent us copies of two laws passed at the recent sessions of the Legislature of Wisconsin. With regard to the first Mr. Brown says: "A considerable number of persons are now known to be engaged in the making and

## RECORDS OF THE PAST

sale of spurious archæological objects and the Wisconsin Archeological Society has caused the passage of the present law for the purpose of protecting local, public and other museums and private collectors of prehistoric Indian material against these. In the past many private collectors have been victimized by these unscrupulous fakers. It is hoped that other states will follow Wisconsin's lead by enacting similar laws and this detrimental traffic will thus be stopped."

The text of the law is as follows:—"There is added to the statutes a new section to read: Section 4454m. The reproduction or forgery of any archæological object which derives value from its antiquity, or the making of any such subject, whether copied or not, with intent to represent the same to be the original and genuine, with intent to deceive or offer any such object for sale or exchange, representing the same to be the original and genuine, or knowingly having possession of any such reproduced or forged objects with intent to offer the same as original and genuine, is hereby declared to be a misdemeanor, and any person convicted thereof shall be punished by a fine of not more than one hundred dollars, or by imprisonment in the county jail for not more than six months, or by both such fine and imprisonment."

The other law reads as follows: "There are added to the statutes three new sections to read: Section 4442m. It shall be unlawful except as herein-after provided to destroy, deface, mutilate, injure, or remove any Indian burial, linear or effigy mounds, enclosures, cemeteries, graves, plots of corn hills, garden beds, boulder circles, manitou rocks, boulder mortars, grind-stone rocks, or other prehistoric or pictograph rocks, caches, shell or refuse heaps, spirit stones or historic Indian remains located upon public lands, state parks, forestry reserves, lands of state educational or other state institutions, or upon other lands or properties belonging to the state; provided, however, that the board, commission, or other state officer or officers having control under the laws of the state of the lands or properties upon which they, or any of them, are situated may grant to state, county, municipal, or national educational institutions, or regularly organized archæological or historical societies, permission to explore or investigate for educational or scientific purposes.

"Section 4442n. The state park board is authorized to grant permission to remove or destroy any of the prehistoric or historic remains herein enumerated whenever said board shall deem such removal or destruction necessary.

"Section 4442o. Any person violating any of the provisions of section 4442m of the statutes shall be deemed guilty of a misdemeanor and upon conviction thereof shall be subject to a fine of not less than ten dollars nor more than one hundred dollars or imprisonment in the county jail for not more than ninety days or by both such fine and imprisonment."

Concerning this latter law, Mr. Brown remarks: "In asking the state to protect its Indian memorials in the interests of history and education, the Society hopes to also encourage private owners to protect the monuments on their own lands. The time is probably not far distant when the state will by the enactment of a proper law assume control of these also."

